PGC
Precision Global Conferences

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#784197

Joint Event Neurology, Addiction and Dementia World Conference

SEPTEMBER 4-6, 2024

VENUE: DOUBLETREE BY HILTON HOTEL
SAN FRANCISCO AIRPOR, 835 AIRPORT BLVD.
BURLINGAME, CALIFORNIA 94010, USA

Contents

About Precision Global Conferences

Precision Global Conferences is a highly established scientific conference organizer. We take high integrity in conveying your achievements to the world and emphasize your incredible work and scientific contribution. Precision global conferences have developed the progression, broadcast, persistence, research, and development activities in cancer, neurology, and nursing science,

We support the beacon of quality research works and efforts of academicians, researchers, scientists, doctors, and all the future young to be experts to confide their outstanding works fearlessly. Our primary goal is to make health care accessible and understandable to people. We are ecstatic to pass on the ray of research, developments, and cutting-edge therapies worldwide. Hence, we are here to organize and conduct highly esteemed conferences.

This conference will emphasize the outstanding works and their medicinal consequences through hybrid presentations. If you're searching for a perfect podium that can reflect your professional ethics and voice your appointment, we are here with the best team, welcoming your honourable presence.

Exhibitor

Sutter Health is a not-for-profit health system that delivers top-rated personalized care in more than 100 Northern California communities. It was recently ranked among the Top 15 Health Systems in the nation by Truven Health Analytics. As a not-for-profit, Sutter Health invests its earnings back into the communities it serves

DAY 1 (IN-PERSON)

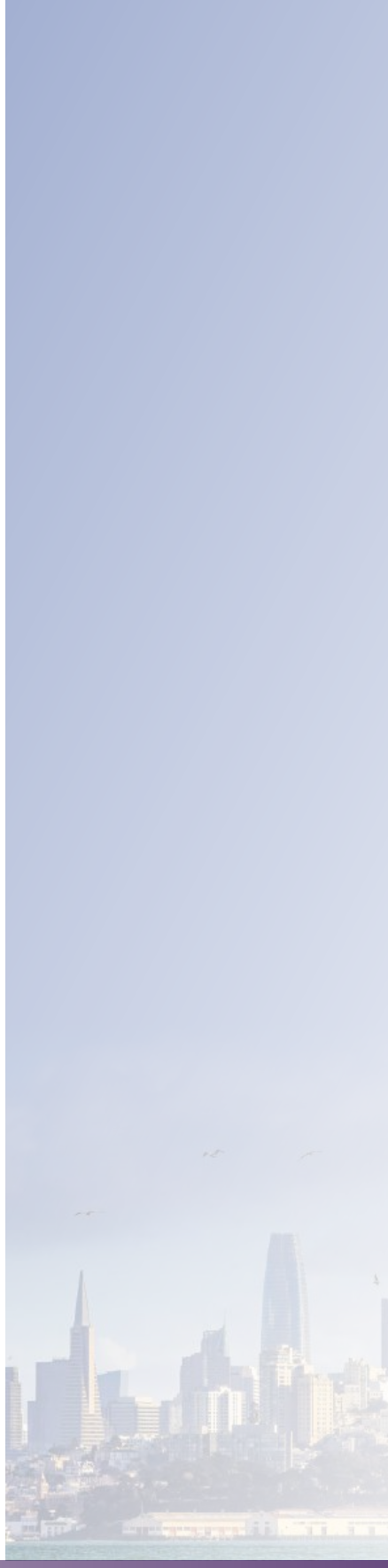
Joint Event

Neurology, Addiction and **Dementia**

World Conference

September 4-6, 2024

California, USA



KEYNOTE SPEAKERS

Expressive Arts Tools for Neurologists to Combat Burnout

Juliana Fort

Clinical Associate Professor in the Department of Psychiatry

and Behavioral Medicine at Louisiana State University Health Shreveport, USA

Six out of ten neurologists in the United States are experiencing some form of burnout, and research suggests similar rates worldwide. Burnout is characterized by the ICD 11 as “overwhelming fatigue and emotional exhaustion, feelings of cynicism, detachment from the job, a sense of ineffectiveness, and a lack of personal accomplishment”.

The cumulative stress of caring for a person with a chronic neurological disorder can contribute to burnout, both among physicians and patient families. Expressive arts techniques using visual art, drama, music, creative writing, and movement, can be used to promote neurologists’ resilience and self care.

Biography

Dr. Juliana Fort is a Clinical Associate Professor in the Department of Psychiatry and Behavioral Medicine at LSU Health Shreveport where she is the Psychiatry Medical Student Clerkship Director and the Associate Director of the Child and Adolescent Psychiatry Fellowship. Dr. Fort is a graduate of the LSU Health Shreveport -- School of Medicine and completed her Psychiatric residency and Child and Adolescent Fellowship in the Department of Psychiatry at Tulane Medical School in New Orleans, Louisiana. She is board certified in Child and Adolescent, Geriatric, Forensic, and Addiction Psychiatry and is a distinguished fellow of the American Psychiatric Association. She is a registered play therapist/supervisor and enjoys training in the Expressive Art Therapies that enrich psychotherapy, wellness, and personal growth through Drama Therapy, Improvisation, and Art and Poetry therapy.

Title 1: Multimodal Protocol for Phantom Limb Pain Prophylaxis in Amputation Surgery

Carla Retroz Marques*

Coimbra University Hospitals Centre, Portugal

Elective mutilating surgery is performed in extreme situations to avoid potentially life-threatening consequences inherent to the evolution of the underlying pathologies. The amputation of limbs constitutes an important physical and psychological aggression with evident deformation of the self-image, interfering widely with normal social integration and rehabilitation to daily activities. Additionally, it can be associated with moderate to severe chronic painful sensations that greatly interfere with quality of life (QoL). Phantom Limb Pain (PLP) is a chronic neuropathic pain syndrome with phantom awareness of an amputated limb, where noxious sensation prevails where the limb existed. It is extremely difficult to control, refractory to conventional therapies, and remains a challenge for the anesthesiologist. Representing a high socio-economic burden with a prevalence of 60-80% worldwide, it remains controversial due to its complexity and the lack of established multidisciplinary protocols.

It is essential that appropriate prophylactic and therapeutic measures are taken and disseminated to minimize this significant human, clinical, and socioeconomic problem. An investigation based on the pathophysiology of pain led to the development of a multimodal protocol for the relief of pre-surgical ischemic pain, acute postoperative pain, and prophylaxis of phantom limb pain. The Multimodal Prophylactic Protocol (MPP) was designed as an interdisciplinary protocol to promote analgesia throughout the perioperative period and prophylaxis of PLP, improving QoL and decreasing social and economic costs. This original protocol consisted of Continuous Epidural Analgesia pre- and post-surgery, with concomitant administration of Tricyclic Antidepressants and an Anticonvulsive agent. The methodology involved the establishment of a multimodal prophylactic protocol between the Chronic Pain Unit and Surgical Departments, with cooperation from the Anesthesiology Department, to ensure efficient analgesia before limb amputation and prevent the later development of chronic pain syndromes.

Biography

Carla Retroz Marques graduated in Medicine from the Faculty of Medicine of the University of Coimbra (FMUC) (1985-1991). She is a Consultant of Anesthesiology at the Coimbra University Hospitals Centre (2010) and holds a Jurisdiction (Competence) in Pain Medicine from The Order of Physicians. She earned a master's degree in Anesthesiology and Pain Therapy from the University of Coimbra (FMUC) (2007) and a Master's Degree in Palliative Care from the same institution (2021). She is a member of the Chronic Pain Clinic at Coimbra University Hospitals Centre (1999-present) and part of the Obstetrical Anesthesia/Analgesia Team during labor (1999-present). Dr. Marques is involved in teaching Ph.D., Master's, and Postgraduate programs, provides training guidance in Anesthesiology and Pain Therapy, and conducts clinical and laboratory research in Anesthesiology. She has participated in clinical trials (Phase II, III, and IV) in Anesthesiology and Chronic Pain and has numerous scientific and research publications. She is an invited scientific peer reviewer for the BMJ and a member of several medical organizations.

Title 2: Epidural Analgesia and Tattoos – A Modified Technique to Minimize Risks and Improve Safety

Carla Retroz Marques*

Coimbra University Hospitals Centre, Portugal

Central neuraxial blocks (CNB), which include spinal, epidural, combined spinal-epidural, and caudal epidurals, are safe locoregional anesthetic techniques, particularly useful in obstetrics. Continuous epidural blockades remain the gold standard in relieving severe labor pain and performing caesarean sections. Over the last twenty years, some studies have raised issues related to the phenomenon of 'coring' when CNB is performed through tattoos. Tissue coring refers to the possible entrainment of cells during skin puncture, and rare complications such as neuraxial epidermoid tumors have been reported.

Despite millions of epidurals and lumbar punctures (LP) performed worldwide, the number of tattoos may be very small, explaining the dearth of research on potential tattoo-related complications. With the increasing prevalence of tattoos, further studies are needed to evaluate the consequences of the tissue coring phenomenon and whether alternative techniques are required. WHO considers tattooing an epidemiological problem due to the presence of toxic, carcinogenic, or pro-carcinogenic substances in tattoo inks, which can induce DNA damage and cellular mutations. Given these concerns, there is renewed interest in studying the possible toxic effects or malignancies associated with tattoos. WHO has established regulatory measures for tattoo ink components, but quality control and monitoring remain challenging. As the number of CNBs in tattooed areas increases, there is a growing likelihood of pathological cases.

This clinical case presents a modified epidural technique designed to minimize the risks associated with the tissue coring phenomenon.

Biography

Carla Retroz Marques graduated in Medicine from the Faculty of Medicine of the University of Coimbra (FMUC) (1985-1991). She is a Consultant of Anesthesiology at the Coimbra University Hospitals Centre (2010) and holds a Jurisdiction (Competence) in Pain Medicine from The Order of Physicians. She earned a master's degree in Anesthesiology and Pain Therapy from the University of Coimbra (FMUC) (2007) and a Master's Degree in Palliative Care from the same institution (2021). She is a member of the Chronic Pain Clinic at Coimbra University Hospitals Centre (1999-present) and part of the Obstetrical Anesthesia/Analgesia Team during labor (1999-present). Dr. Marques is involved in teaching Ph.D., Master's, and Postgraduate programs, provides training guidance in Anesthesiology and Pain Therapy, and conducts clinical and laboratory research in Anesthesiology. She has participated in clinical trials (Phase II, III, and IV) in Anesthesiology and Chronic Pain and has numerous scientific and research publications. She is an invited scientific peer reviewer for the BMJ and a member of several medical organizations.

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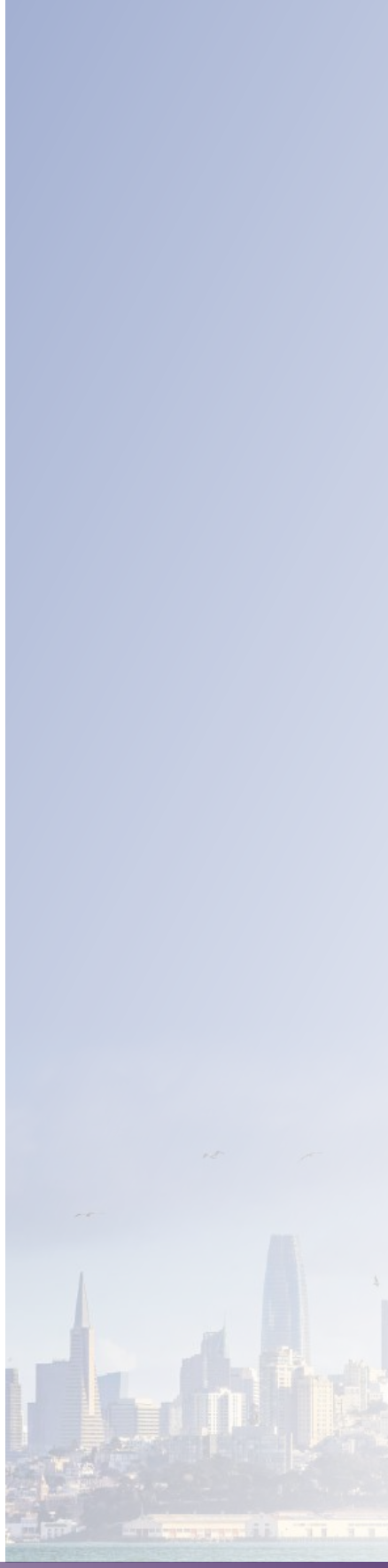


ORAL SPEAKERS

A Cross-Sectional Study of Plasma Aβ42/40 Ratio, ALZpath pTau217, pTau181, GFAP and Nf-L in an Alzheimer's Disease Clinical Cohort Characterized by Amyloid PET Imaging

Ahmed Chenna*

Labcorp-Monogram Biosciences, South San Francisco, USA

Abstract: Objective: This study presents a cross-sectional analysis of multiple plasma biomarkers including Aβ42/40 ratio, ALZpath pTau217, pTau181, GFAP, and Nf-L across different stages of Alzheimer's disease (AD), correlating their performance with amyloid PET imaging status.

Background: Recent advancements in immunoassay technology have facilitated sensitive detection of key biomarkers associated with AD pathology in plasma. However, further exploration is needed to assess their diagnostic accuracy, especially in pre-symptomatic and symptomatic AD.

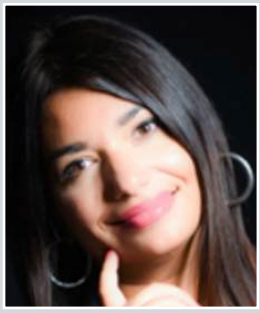
Design/Methods: We analyzed EDTA-plasma samples from 200 participants in the AIBL cohort, categorized into cognitive normal (CN) Aβ- (n=75), CN Aβ+ (n=50), mild cognitive impairment (MCI) Aβ+ (n=25), and AD Aβ+ (n=50) groups. Biomarkers were measured using the Lumi pulse Aβ42/40 assay, Simoa Neuro-4-plex E assay (Aβ42, Aβ40, GFAP, Nf-L), ALZpath Simoa pTau217 assay, and Simoa pTau181 v2 assay.

Results: Significantly lower Aβ42/40 ratios were observed in Aβ+ compared to Aβ- groups ($p<0.0001$), with variations across clinical subgroups ($p<0.0001$). ROC-AUC for Aβ42/40 ratio vs amyloid PET status was 0.88, indicating strong discriminatory ability. Levels of pTau217 and pTau181 were elevated in Aβ+ groups ($p<0.0001$) and correlated with disease severity. ROC-AUC for pTau217 vs amyloid PET status was 0.95, demonstrating high diagnostic accuracy. Multivariable models combining the Aβ42/40 ratio and demographic factors improved AUC to 0.913, further enhanced to 0.978 with the inclusion of pTau217.

Conclusion: This comprehensive plasma biomarker study in an AD clinical cohort underscores the utility of Aβ42/40 ratios and pTau217 levels in association with amyloid PET imaging. These findings support their potential role in advancing AD drug development and clinical management strategies.

Biography

Dr. Ahmed Chenna, Ph.D., is a principal scientist at Labcorp-Monogram Biosciences, specializing in oncology and neuroscience research. With over 30 years of experience across academia and biotechnology, he has contributed significantly to advancing biomedical technologies and understanding disease mechanisms. Dr. Chenna has authored numerous publications and holds several patents, focusing on innovative approaches to diagnostics and therapeutics in neurodegenerative diseases.



Increased Drug and Physical Activity Addiction Among Nurses in Burnout: Exploratory Study on an Italian Nurse's Sample

Rosaria Ferrara1*, Iovino L2, Ricci P 1, Damato F1

1Department of Anatomy Histology, Legal Medicine and Orthopedics, Sapienza University of Rome, Italy
2"Parthenope" University of Naples, NaplesBS Lake Erie College of Osteopathic Medicine, Bradenton, United States
Lake Erie College of Osteopathic Medicine, USA

Abstract: Background: The link between the experience of stressful situations at work and the use of substances is now consolidated. Of course, among the working categories that most experience work-related stress and consequent burnout, there is that of nurses. Scientific literature has already highlighted the risk, in situations of stress and burnout experienced by nurses, of responding to these situations by developing addictions, especially with substance abuse. Our exploratory study, in addition to verifying the use/abuse of drugs in nurses, also verified the tendency to implement physical activity addiction strategies to cope with burnout.

Methods: To assess burnout and drug addiction, a questionnaire was administered to a group of nurses (N=196) with an average age of 29.2 years (SD 4.98), consisting of more female subjects than male ones (F=144; M=52). Burnout was assessed using the Maslach Burnout Inventory (MBI), which contains 22 items that assess the three components of burnout. Furthermore, questions regarding addictions were included (frequency of drug use and frequency of physical activity). Multiple correlation analyses (Spearman's Rho) were performed using SPSS 25 Software. In addition, gender-specific differences were computed using the U-Mann Whitney test for ranges of average.

Results: Analyses show how the MBI components (Emotional Exhaustion, Personal Realization, and Depersonalization) are associated with the other dimensions measured by the questionnaire. Specifically, a high score of Emotional Exhaustion is strongly linked with the frequency of drug use (.236; $p < 0.001$) and moderately with a low frequency of physical activity (-.183; $p < 0.05$). In contrast, Personal Realization is inversely associated with drug addiction (-.142; $p < 0.05$). A higher score in the Depersonalization component is strongly associated with an increased frequency of physical activity (.231; $p < 0.001$). Gender differences showed statistically significant differences between the frequency of physical activity ($M > F$; $p < 0.001$), frequency of drug use ($F > M$; $p < 0.01$), and scores on the Depersonalization scale ($M > F$; $p < 0.001$).

Conclusion: The results of the analysis show how the three components of burnout, as formulated by Maslach, lead to the observation of different effects when associated with variables such as physical activity and drug addiction. The observed results underline how the different components establish peculiar interactions. It is interesting to observe how Emotional Exhaustion is more strongly related to drug use, whereas Depersonalization is linked to excessive physical activity.

Biography

Psychologist and psychotherapist, Rosaria Ferrara obtained her first PhD at the University of Lausanne in Biology and Medicine on the autistic phenotype. She is currently completing a second doctorate in Medicine at the "Sapienza" University in Rome, focusing on clinical psychology and biopsychosocial well-being. She holds the role of contract professor in clinical and work psychology, with great attention to well-being at work and the risk of burnout.I work on the synthesis of different materials for different applications. Bio-scaffold for bone regeneration, biosensors, drug delivery systems, and water desalination membranes.

Holistic Rehabilitation atIts Best

Peter P Lyndon-James*

West Australian Shalom Group Inc,Australia

The efficacy of holistic, wellness-based addiction counseling and recovery practices has garnered increasing attention as traditional methods often fall short of addressing the multifaceted nature of addiction. Holistic approaches, which integrate physical, mental, emotional, and spiritual dimensions, offer a comprehensive strategy that acknowledges the complexity of addiction and promotes overall well-being. This abstract examines the core principles, methodologies, and outcomes associated with holistic addiction counseling, underscoring its advantages over conventional treatments.

Holistic addiction counseling operates on the premise that addiction is not merely a physical dependency but a manifestation of underlying emotional, psychological, and sometimes spiritual distress. Consequently, these practices incorporate diverse therapeutic modalities, including but not limited to, psychotherapy, mindfulness along occupational activities, mainly work-based training. The aim is to heal the person, rather than focusing solely on the symptoms of addiction.

Mindfulness-based interventions have been shown to reduce stress, enhance self-awareness, and improve emotional regulation, which are critical in the context of addiction recovery. Studies indicate that mindfulness can decrease the likelihood of relapse by helping individuals manage cravings and develop healthier coping mechanisms. Similarly, work, structured routine, and physical exercise contribute to physical well-being and stress reduction, promoting a balanced lifestyle that supports long-term recovery.

Emotional and psychological healing are also central to holistic addiction counseling. Even though we may not label it as such, techniques such as cognitive-behavioral therapy (CBT), dialectical behavior therapy (DBT), and trauma-informed care are integrated to address the root causes of addiction, such as unresolved trauma, anxiety, and depression. These therapies help individuals understand and alter destructive thought patterns, develop healthier behaviors, and build resilience against future stressors.

Spiritually plays a significant role in holistic recovery. Many holistic programs encourage practices like meditation, prayer, and participation in support groups, which can provide a sense of purpose, community, and inner peace. Spirituality can be particularly beneficial for those who feel disconnected or are seeking meaning beyond their addiction.

The efficacy of holistic, wellness-based addiction counseling is supported by growing empirical evidence. Research suggests that individuals who engage in holistic treatment programs experience lower rates of relapse compared to those who undergo traditional methods alone. Holistic approaches are associated with higher levels of resident satisfaction and engagement, likely due to their comprehensive nature and the personalized care they provide.

Furthermore, holistic counseling has been shown to improve various aspects of life quality, including mental health, physical health, and social relationships. By addressing the full spectrum of an individual's needs, holistic practices facilitate a more sustainable and fulfilling recovery process.

In conclusion, holistic, wellness-based addiction counseling and recovery practices present a promising alternative to traditional addiction treatment methods. By addressing the interconnected physical, emotional, psychological, and spiritual dimensions of addiction, these practices offer a more thorough and individualized approach to recovery. The integration of mind-body techniques, nutritional therapy, psychological support, and spirituality not only aids in the immediate cessation of substance use but also promotes long-term well-being and relapse prevention. As the

evidence base grows, holistic approaches are likely to become an increasingly integral part of comprehensive addiction treatment programs, reflecting a shift towards more humane and effective recovery practices.

Biography

Peter is the Founder and CEO of Shalom House, a full-time residential treatment service provider that has a strong focus also on reintegration & resocialization. Shalom assists men, women, and families in their efforts to free themselves from addiction as well as other life-controlling issues and is known as Australia's largest holistic, 100% self-funded rehabilitation center.

In and out of institutions/prisons since becoming a ward of the state at the age of nine, Peter has faced a life of crime and drug addiction. After a life-changing experience, Peter broke free from drugs and has been on a mission to save others who find themselves trapped by addiction and other life-controlling issues ever since.

After working as a Prison Chaplain, Peter opened Shalom House in 2012. His intention was to mentor, teach, and guide men, women & families who battle with any life-controlling issue.Peter has served as a City of Swan Councilor, representing the Ward of Altone in which he grew up, and most recently has run for a seat in the Legislative Council for East Metro in the Upper House.

Peter's efforts and the work done at Shalom House in restoring the lives of men and families in the community have been recognized on many platforms, including personally being named the West Australian of the Year in the Community category and finalist in the Australian of the Year awards along with Commendations from the previous West Australian Police Commissioner and now Governor of Western Australia, Chris Dawson.

Today, Shalom House has 160 residents and over 70 staff, including mentors, administrators and coordinators. There is also an army of volunteers helping to keep the facility running. It receives no Government support or grants, remaining 100% self-funded. For the first 10 years, Peter worked as a full-time volunteer as founder/CEO.

Peter gives every waking hour to developing this program which, despite the COVID-19 pandemic in 2020, expanded to include a Women's Program and now Family Services; Shalom House is multi-award winning at local, state, and national levels.With an increasing number of graduates from Shalom, Peter has now set out to educate the community, the families, and the addict - teaching them the best way to bring abouteffective change and how to stop the cycle of destruction that drugs cause.

He travels extensively speaking to all levels of society in his area of expertise and will be presenting this year at the 2024 Addiction World Conference in San Francisco.

Autotaxin as a Novel Biomarker of Migraine

Tomas Sobrino*

Health Research Institute of Santiago de Compostela (IDIS), Santiago de Compostela, Spain

Abstract: Background: Migraine, characterized by recurrent severe headaches, is a prevalent neurological disorder with complex pathogenesis involving genetic, epigenetic, and environmental factors. Autotoxin (ATX) is implicated in processes relevant to migraine pathophysiology, such as neuropeptide release, endothelial dysfunction, and neuroinflammation. This study investigates ATX as a potential biomarker for migraine, assessing its serum levels in healthy controls, episodic migraine (EM), and chronic migraine (CM) patients, alongside other biomarkers and clinical parameters.

Methods: A cross-sectional study included 69 controls, 44 EM, and 37 CM patients. Serum levels of ATX, inflammatory markers (IL-6, IL-10), trigeminovascular activation (CGRP), endothelial dysfunction markers (PTX-3, cFn, sTWEAK), and sphingolipidomic profiles were analyzed. Clinical correlations and treatment responses were evaluated.

Results: Elevated ATX levels were significantly higher in EM (310.7 ± 79.69 ng/mL) and CM (336.7 ± 66.93 ng/mL) compared to controls (212.3 ± 53.19 ng/mL) ($p<0.0001$). ATX correlated with CGRP, endothelial dysfunction markers, and IL-6 levels (all $p<0.001$). Higher ATX levels were associated with poor response to Onabotulinumtoxin Type A treatment in EM patients. Sphingolipidomic analysis revealed decreased Lys phosphatidylcholine levels in migraine patients, indicating heightened ATX activity.

Conclusion: ATX shows promise as a diagnostic and therapeutic biomarker in migraine, reflecting disease severity and treatment response variability. Further research is warranted to elucidate its mechanistic role and validate its clinical utility.

Biography

Tomás Sobrino graduated in Molecular Biology and Biotechnology from the University of Santiago de Compostela in 2003. He completed his Ph.D. in Biochemistry and Molecular Biology in 2007 at the same university, receiving an Extraordinary Doctoral Award. Currently, Dr. Sobrino directs the Neuroaging Group at the Clinical Neuroscience Research Laboratory, IDIS, and serves as an associate professor in Neuroscience at the University of Santiago de Compostela, Spain.

Family Centered Addiction Program

Patti Petrucka1*, Deena Benson

1Ranch Ehrlo Society, Canada

The Family Centered Addiction Program is focused on keeping families intact, safe, and healthy while participating in an intensive addiction residential program. Individuals seeking treatment for addiction recovery and relapse prevention can attend therapy with their family members. They will attend daily structured holistic programming focusing on trauma, mental health, co-dependency, family function, and addictions psychological education. Weekly programming is offered to children and youth impacted by parental habits. Highly trained staff provide daily support in the family home to assist in relationship building, parenting skills, and overall positive family functioning. Another treatment is geared to the needs of the families, including safety in parenting, child behavior management, parent education and support on discipline, and child development and relationships. Families are also offered services in nutrition, household management, self-care, and employment/educational skills.

The program, although still in its infancy, has shown significant outcomes of families remaining safely intact one-year post-discharge. There is the number so families served was xxx; the number of children preserved or reunified with the family was xxx

We work with referring agents from each province and territory in Canada.

Biography

Patti Petrucka has over 30 years of experience as a registered graduate-level social worker. Patti has been a sessional lecturer at the University of Regina for 22 years and is committed to educating upcoming social workers. She specializes in child welfare, direct practice approaches, and anti-oppressive practice focusing on families.

Patti's current role is the Director of Family Programs, where she has developed three treatment programs for families. Patti has made numerous local, national, and international presentations. Most notable the National Child Welfare Conference in Calgary, The World Forum Child Welfare League –New York, the National Association of Social Workers - Halifax, a National Conference in San Francisco, and the International Child and Youth Care Conference in Victoria, British Columbia.

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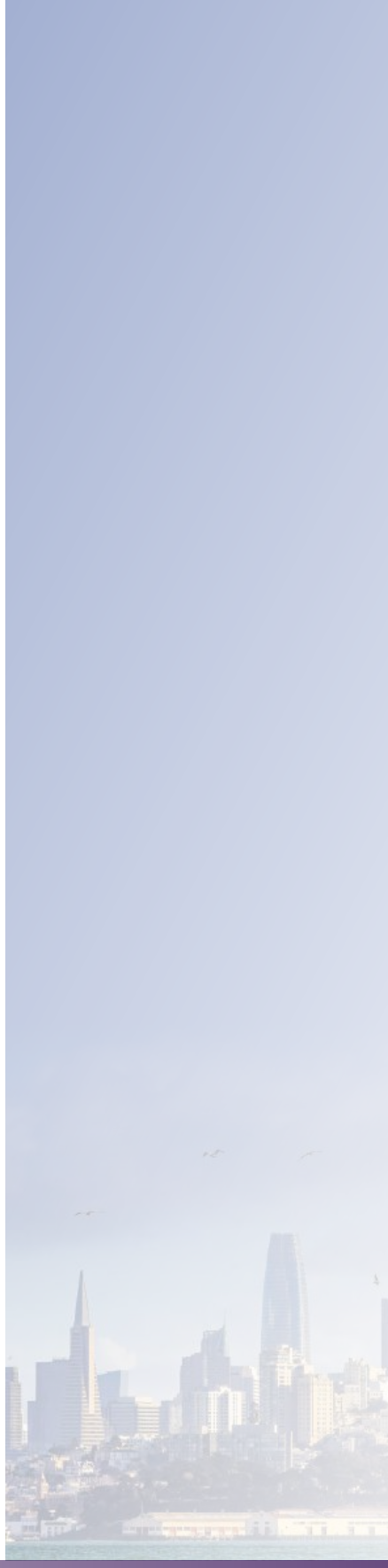

KEYNOTE SPEAKERS

Neurogenesis Hypothesis and NA-901 for the Treatment of Major Depressive Disorder

Lloyd L. Tran*

1Biomed Industries, Inc.

Major depressive disorder (MDD) presents significant challenges due to its potential for social, occupational, and educational impairment. While various drugs exist for depression management, a considerable number of patients develop treatment-resistant depression alongside notable adverse effects.

NA-901, a small molecule drug developed for MDD treatment, following the guidance under the neurogenesis hypothesis. This hypothesis suggests that stressful experiences inhibit neurogenesis in the dentate gyrus's sub-granular zone, thereby playing a pivotal role in depression pathology and treatment.

NA-901 not only acts as a neurogenesis agent but also elevates extracellular levels of serotonin (5- HT), noradrenaline, dopamine, acetylcholine, and histamine in the rat prefrontal cortex and hippocampus.

Our Phase 1B pilot study, a randomized, double-blind, fixed-dose, placebo-controlled investigation, assessed the efficacy, safety, and tolerability of two fixed doses (20 and 40 mg/d) of NA-831 compared to placebo over a 6-week treatment period in 32 adult MDD patients.

Venlafaxine XR, an FDA-approved depression drug, served as the active reference. The primary efficacy analysis demonstrated significant improvements with both NA-901 doses compared to placebo. Notably, the difference in the Montgomery-Åsberg Depression Rating Scale (MADRS) scores of approximately 7 points between active treatment and placebo translated to a clinically relevant difference in response rates, surpassing those of average antidepressants approved by USA and European health authorities.

The NA-901 treatment group reported mild adverse effects such as headache and dry mouth, contrasting with the venlafaxine group, which experienced more severe symptoms including nausea, headache, loss of strength, blurred vision, chest pain, rapid or irregular heartbeat, and suicidal ideation. Venlafaxine XR was included to validate the study methodology and demonstrated effectiveness in the primary efficacy analysis.

Overall, NA-901 treatment proved well-tolerated and effective in alleviating depressive and anxious symptoms in MDD patients. Further discussion on clinical results and the neurogenesis hypothesis will be provided.

Biography

Lloyd L. Tran, PhD is the Chief Scientific Officer of Biomed Industries, Inc. Lloyd has 25 years of experience in drug discovery and business development.

Neuropsychiatric Consequences of Endocrine Dysfunctions

Hassan M. Heshmati*

Endocrinology Metabolism Consulting, LLC, Hassan Heshmati and Valerie Shaw Endocrine Research, Anthem, USA

The endocrine system is composed of multiple organs/glands/tissues producing a variety of hormones. The central nervous system has receptors for multiple hormones (e.g., growth hormone, thyroid hormones, and sex hormones). Several hormones have an important role in cell development of the central nervous system and in brain connectivity. Dysfunctions of the endocrine system can adversely impact the central nervous system either directly or through the consequences of the endocrine dysfunctions. This presentation reviews the neuropsychiatric manifestations of excess or deficiency of hormones that are produced by the hypothalamus, pituitary, thyroid, parathyroids, adrenals, pancreas, testes, and ovaries. The syndrome of inappropriate antidiuretic hormone (arginine vasopressin) secretion, observed in a variety of medical conditions (e.g., tumours and drugs), is responsible for hyponatremia. Hyponatremia causes headache, nausea, somnolence, and disorientation. Severe and rapidly evolving hyponatremia can lead to seizures, coma, and death. Excess growth hormone, commonly due to a pituitary adenoma and responsible for acromegaly, is associated with anxiety and depression. Excess thyroid hormones (hyperthyroidism), a medical condition caused by autoimmunity (Graves' disease) or toxic adenoma, is responsible for irritability, nervousness, agitation, tremor, insomnia, anxiety, depression, and psychosis. Excess parathyroid hormone (hyperparathyroidism), mainly caused by a parathyroid adenoma or hyperplasia and responsible for hypercalcemia, can induce cognitive impairment, insomnia, anxiety, depression, and psychosis. Parathyroid hormone deficiency (hypoparathyroidism), due to different causes such as surgery and autoimmunity and responsible for hypocalcaemia, is associated with cognitive impairment, depression, and seizures. Excess cortisol (hypercortisolism), mainly due to an adrenocorticotropic-secreting pituitary adenoma (Cushing's disease) or adrenal adenoma (Cushing's syndrome), is causing anxiety, depression, and psychosis. Aldosterone and cortisol deficiencies (adrenal insufficiency) of peripheral or central origin can induce cognitive impairment, depression, and psychosis. Excess catecholamines, observed in a variety of medical conditions especially a tumour of the adrenal gland (pheochromocytoma), is responsible for anxiety. Excess insulin produced by a pancreatic tumour (insulinoma) causes hypoglycaemia. Hypoglycaemia can be associated with tremor, confusion, seizures, and coma. With type 1 and type 2 diabetes, disorders resulting from deficiency of insulin secretion and/or action, subjects may develop depression. Testosterone deficiency in men (male hypogonadism), a hereditary/congenital or acquired medical condition, is responsible for low libido, anxiety, and depression. Estrogen deficiency in women (female hypogonadism/menopause), a medical condition that can be hereditary/congenital or acquired, is associated with hot flushes, decreased sexual desire, sleep and mood disorders, learning and memory impairments, and depression. Progesterone deficiency during the luteal phase of the menstrual cycle is responsible for premenstrual syndrome (irritability, mood swing, anxiety, and depression). Most of the above neuropsychiatric manifestations can be reversed with the appropriate treatment of the endocrine dysfunctions.

Biography

Hassan M. Heshmati, Medical Doctor, Endocrinologist, has 48 years of experience in clinical research in both Academia (University-Affiliated Hospitals, Paris, France and Mayo Foundation, Rochester, MN, USA) and Pharmaceutical/Biotech Companies (Sanofi, Malvern, PA, USA, Essentials, Carlsbad, CA, USA, and Gelesis, Boston, MA, USA). His research activity has been related to pituitary tumour, hyperthyroidism, thyroid cancer, osteoporosis, diabetes, and obesity. He has extensive knowledge in the development of anti-obesity products. He has authored 334 abstracts, book chapters, and articles related to Endocrinology and Metabolism. Currently, he is a Consultant at Endocrinology Metabolism Consulting, LLC, Hassan Heshmati and Valerie Shaw Endocrine Research, Anthem, AZ, USA.

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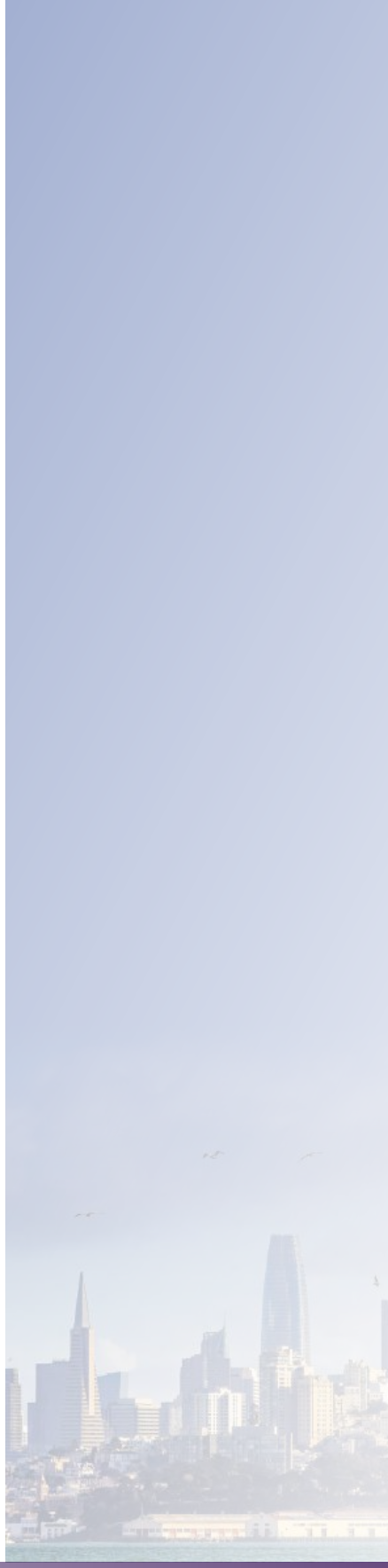


ORAL SPEAKERS

Co-Occurring Substance Use Disorders and Eating Disorders Experiences of Individuals in Recovery

Diana Lynn Monsour*

Compassionate & Empowering Counseling, USA

Substance use disorders (SUDs) and eating disorders (EDs) are serious and fatal mental health disorders that severely impact an individual's quality of life. In the US, substance-related and eating-related issues are epidemics that plague the nation, making it impossible for the counseling profession to ignore them. Furthermore, SUDs and EDs are often co-occurring (SUD+ED), complicating treatment and recovery for both the individual seeking treatment and the professional. Research exists on individuals who have recovered from a SUD, as well as individuals who have recovered from an ED, and often these approaches have conflicting ideologies. There are limited qualitative studies with individuals who are navigating recovery from both disorders. This is a presentation of a study that was conducted as part of a dissertation. The major purpose of this presentation is to explore the phenomenon of recovery by reflecting on essential themes revealed through the lived experiences of individuals with SUD+ED. The presentation is designed to inform clinical practices based on what has worked for individuals who have overcome their disorders. The presentation is unique and significant in that this study examined individuals with different combinations of SUD+ED, filling a need in the counseling and treatment literature. This presentation provides recommendations for practice and research for counselors and treatment professionals in inpatient and outpatient settings.

Biography

Dr. Diana Monsour is a Licensed Professional Counselor and a Licensed Chemical Dependency Counselor. She received her master's and doctorate in Counselor Education from Texas Tech University. Diana specializes in substance use disorders, eating disorders, and co-occurring disorders. Diana has worked in the treatment field for over 9 years and is now working in private practice.

Assessing Risky Behavior Among PWID in the Country of Georgia– Results from Simplified Bio-Behavioural Survey Methodology, the BBS-Lite

Gogia M1*, Kiladze T1*, Stvilia K2, Verster A3, Ruadze E2, Sabin K4,

Methers B5

1Georgian Harm Reduction Network, Georgia, 2National center for disease control and prevention of Georgia

2World Health Organization, 4UNAIDS, 5Kirby Institute, University of New South Wales Sydney, Australia

Abstract: Background: Injecting drug use was a leading route of HIV transmission in the early stages of the HIV epidemic in Georgia. The estimated number of PWID is 51,000 in Georgia with 2.23% national prevalence problem drug use among 18-64 years old individuals (2022). Simplified lite-BBS methodology was developed to assess risky behaviors and HIV/HCV testing uptake among PWIDs and Generate evidence for advocacy, policymaking, and programming in 2023.

Methods: 2000 PWIDs were recruited through combined methodology of on-site consecutive recruitment at Needle and Syringes Program (NSP) sites and mobile outreach, and snowball sampling. The study was conducted in seven major cities. A brief questionnaire was administered through face-to-face interviews with participants. Blood samples were taken to measure HIV and HCV prevalence and HCV reinfection.

Results: 51.3% of study participants never used the HR services, and 54% (1080/2000) did not use HR services during the last two years. Among new clients, 19% were recruited through outreach, 60% through the "snowball" method, and 21% through HR service sites. The mean age of respondents was 42 years (SD 10 years). Female participants, in general, were older than male participants (borderline significant), and new clients were younger than existing clients (statistically significant). The most common drugs injected the last time were opioids apart from heroin (56%), followed by heroin 30% (598) and cocaine and amphetamine-type stimulants.

Both new and existing clients of HR programs most commonly engage in the drug injecting activity "once a day" (24% and 29% respectively). "2-3 times per week" and "few times per month" were also relatively common for both groups. Out of 2000 study participants, 8.4% (168/2000) reported they had experienced an overdose during the last year.

During the last injection, sharing drug preparation and other equipment was mentioned by 34% of respondents, but Ninety-96% percent reported using sterile needles and syringes the last time they injected. 19% reported injecting practice while abroad in the last 12 months, including countries with no harm reduction programs Turkey (29%), Russia (6%).

During the last 12 months, 32% of respondents accessed medical facilities for addiction-related treatment. usage of condoms during the last sexual intercourse was reported by 33% of respondents. Out of the total cohort, 81% had HIV testing experience. HIV prevalence was 1.5%.

Conclusions: BSS-Lite study provided a good alternative for reaching out to new clients and assess the drug injecting practices in PWIDs not currently utilizing the harm reduction services. Risky sex behavior among PWID remains challenging and requires attention of harm reduction program to develop targeted peer driven interventions to address it.

Biography

Georgian Harm Reduction Network, Georgia.

Associations Between Alzheimer's Disease and Obesity: Clinical Trials of NA-831 for AD and NA-931 for the Treatment of Obesity

Lloyd L. Tran*

Biomed Industries, Inc. San Jose, CA USA

Background: NA-831 is a new drug candidate, exhibiting neuroprotection, neurogenesis and memory enhancing properties for the treatment of Alzheimer's Disease (AD). NA-931 is an analog of NA-831, regulating the homeostasis of the quadruple receptor agonist: IGF-1, GLP-1, GIP and Glucagon for obesity.

Method: A randomized clinical trial of NA-831 was performed in 112 participants with mild and moderate AD, half received the drugs and half received placebo. The patients with MCI received 10 mg of NA-831 or placebo orally per day. The patients with mild and moderate AD received 30 mg of NA-831 or placebo orally per day. Subjects with MCI to meet the NIA-AA core clinical criteria, CDR score of 0.5 and a Memory Box score of 0.5 or greater at Screening and Baseline. MMSE score ≥22. Subjects with mild & moderate AD to meet the NIA-AA core clinical criteria. MMSE: 17-21. Animal Studies of NA-931: A 14-day study in diet-induced obesity DIO-NASH mice was conducted to evaluate the treatment of NA-931 on obesity.

Results: NA-831 showed a significant improvement for patients with mild and moderate AD with the ADAS-Cog-13 score change of an average of 4.1 as compared to the placebo after 24 weeks of treatment ($p = 0.001$; ITT). CIBIC-Plus showed 78 % patients improved ($p = 0.01$; ITT). mNA- 831 was well-tolerated at 30 mg/day. It was observed that 66% (12 of 18) patients having diabetes amongst 56 patients on the NA-831 drug treatment reported a loss of 17-23 % of body weight over 6 months. Only 4 of 7% of 56 patients on placebo reported a loss of 3-5 % over 6 months. There were no serious adverse events observed. In addition, a 14-day study in DIO-NASH mice had demonstrated that treatment with NA-931 resulted in significant reductions in body weight up to 26% ($p<0.0001$), as well as reductions in plasma glucose and plasma triglycerides up to 23% and 34%, respectively ($p<0.003$ for each). NA-931can reduce the body mass index, without causing the muscle loss. Clinical Trials of NA-831 for the treatment of obesity A Phase 2, 13-week randomized, double-blind, placebo-controlled, parallel arm study that evaluates the safety, tolerability, weight loss efficacy, pharmacodynamic effects, and pharmacokinetics of NA-931 in adults who are obese (BMI ≥30 kg/m2) or who are overweight (BMI ≥27 kg/m2) with at least one weight-related co-morbid condition. A topline result of the Phase 2 Trials of NA-931 to study subjects who are obese with at least one weight-related comorbid condition will be highlighted presented.

Conclusion: An association of Alzheimer's disease and diabetes obesity has been implicated with clinical results of NA-831 and NA-931. Phase 2 clinical trials of NA-831 has demonstrated a proof of safety and efficacy for the treatment of early onset of Alzheimer's Disease. NA-931 has shown a promising results in animal studies and a topline Phase 2 results for the treatment of obesity.

Biography

Lloyd L. Tran, PhD, is the Chief Scientific Officer of Biomed Industries, Inc. Lloyd has 25 years of experience in drug discovery and business development.

The Psychosocial Impact of COVID-19 on Healthcare Workers in North India

Vinita Elizabeth Mani1*, Akshat Kumar Srivastava1, Ankita Gupta1, Zubair Sarkar1, Gutti Nagendra Babu1

Vinita Elizabeth Mani1*, Akshat Kumar Srivastava1, Ankita Gupta1, Zubair Sarkar1, Gutti Nagendra Babu1

Abstract: Background and aims: Coronavirus disease (COVID-19) was a pandemic with physical, mental and socioeconomic effects. We aimed to study the psychosocial impact of COVID-19 on healthcare workers (HCWs) in North India.

Design and Methods: An online survey using SurveyMonkey was floated through WhatsApp among HCWs, using 'chain-referral sampling'. Complete responses were included. Prevalence of anxiety and depression were assessed using Generalized Anxiety Disorder scale, and Patient Health Questionnaire 9. Data analysis used IBM-SPSS software to calculate predictors of anxiety and depression.

Results: Among 949 responses, ranging between 24 and 65 years with 560(59%) males. There were 194(20.5%) doctors, 357(37.6%) nurses, 19(2.0%) technicians, 49(5.2%) office staff, 100(10.5%) housekeeping staff and 72(7.6%) security guards among others. Approximately 38% (361) of the HCWs were anxious, with 13.3% having significant anxiety. Females were significantly more anxious (48.6%vs30.7%; p<0.001), as were clinical HCWs (50.1%vs21.8%; p<0.001) and HCWs <50 years (41.4%vs20.5%; p<0.001). Those with regular salaries were less anxious than others (27.5%vs43.9%; p<0.001). Nearly 61% (574) HCWs were depressed, with 23% having significant depression. Depression was significantly more among HCWs <50 years (67.5%vs44.4%; p<0.001) and clinical HCWs (65.3%vs53.8%; p<0.001). Income of 39% HCWs was affected, and 22% (207) reported increase in alcohol abuse. 54% reported media sensationalism worsened anxiety. On regression analysis, female sex was an independent predictor of anxiety, while younger age and clinical work were independent predictors of anxiety and depression.

Conclusions: Nearly 38% of HCWs were anxious and 61% depressed. Female sex was an independent predictor of anxiety, while younger age and clinical work were independent predictors of anxiety and depression.

Biography

I am a neurologist with multiple fellowships, and a heart to serve and make a difference. I believe in research that directly impacts patient care. My greatest research contribution has been the discovery of scrub typhus as a cause of encephalitis in my state. I am presently working as an additional professor in Neurology in a tertiary care teaching institute in India and have 24 publications in reputed journals. I am interested in neuro-infections, stroke, epilepsy, headache and neuropsychiatry. Besides neurology, I am a wife, mother, daughter and sister. I love reading, crocheting, and playing the piano and the guitar.

Influence of Loss of Autonomy and Marital Status on the Worsening of Depression and Anxiety and Consequent Impact on Mortality in Cancer Patients

Marques*

Faculty of Medicine, University of Coimbra (FMUC), Portugal

Patients with cancer pain are generally prone to experience biopsychosocial conditioning factors in an exponential manner. Among them are chronic pain, sleep disturbances, changes in daily activities, and lack of family care and social support that,together, constitute a vicious cycle that can lead to the worsening of the anxiety and depression baseline. The physiological impact of the severity of psychological distress can alter the pain threshold itself. It is generally recognized that a weakened psychosomatic system can influence pathology and the success of therapy. Nevertheless, in the oncologic field, the degree to which the different elements interact is an incognita, these interactions being the core of our research through multidimensional questionnaires. The present study focuses on the analysis of the impact of biopsychosocial dimensions in cancer patients, namely the relationship between marital status and individual autonomy with depression and anxiety and the consequent impact on mortality. This multifactorial prospective observational cross-sectional study, approved by the Ethics Committee of Coimbra University Hospital, was carried out bythe Chronic Pain Unit over a period of one year and involved 120 cancer patients. All of them filled out three questionnaires that were validated for the Portuguese Language namely Short-Form-36, Brief Pain Inventory and Hospital Anxiety and Depression Scale, respectively related to quality of life, pain evaluation and depression/ anxiety assessment. The results were obtained through the statistical correlation of the variables analyzed from the three questionnaires, admitting the level of significance statistic for a range of 95% confidence ($p<0.05$). This allowed to determine that the loss of individual autonomy had a significant impact on the worsening of depression ($p<0.01$), but not on anxiety ($p=0.125$). Concerning marital status, although there was a less significant correlation, depression was still found to be associated with marital status($p=0.042$), being worse in widowed and divorced individuals. No correlation was found between marital status and anxiety($p=0.653$). The association between depression and anxiety with mortality was statistically significant ($p=0.02$ and $p=0.037$, respectively). The conclusions point to the importance of early recognition of eventual distress symptoms in the treatment of oncologic patients, coupled with rigorous pain treatment. It was also verified that in the oncology population studied, higher mortality was associated with high scores for depression and anxiety. For cancer patients, support from family caregivers and social networks should not be neglected, and healthcare providers should encourage individual autonomy to improve overall treatment outcomes. More extensive studies are neededon the subject, but it seems to be worthwhile to promote a holistic treatment of cancer patients, not only to improve the immediate QoL but, ultimately, to contribute to the extension of the life expectancy itself.

Biography

Inês Alexandra Carvalho Retroz Moreira Marques was born on April 8, 2001, in Coimbra, Portugal. She completed her high school education at Colegio da Rainha Santa Isabel in Coimbra in 2019. She is currently pursuing a master's degree in medicine at Faculdade de Medicine da Universidade de Coimbra (FMUC). Inês also studied piano at the Conservatoria de Música de Coimbra. She is proficient in Portuguese, English, and Italian. In addition to her academic pursuits, she is the current Coordinator of the CUMN Choir at Centro Universitario Manuel da Nóbrega and has been actively involved in volunteer work, including participating in Missão País. She has also attended various workshops and courses, such as the XII In4Med Congress in 2023, focusing on ENT examination and prehospital emergency care.

Interdisciplinary Approaches to Childhood Trauma: Machine Learning and Biomedical Monitoring in Predicting Domestic Violence Trends

Yu-chun Lin*

Institute of Medicine, Chung Shan Medical University, Taichung, Taiwan

Childhood trauma is a recognized precursor to mental disorders (Kerns et al., 2015). This study investigates the extensive impact of childhood and adolescent trauma on social, interpersonal, and psychological health, referencing the works of Keane & Barlow (2004), Koss et al. (1991), and Kulka et al. (1990). Utilizing domestic violence reports from Taiwan spanning 2006 to 2022, we analyzed correlations with child violence rates during the corresponding years. Employing machine learning for predictive analysis, our findings indicate a troubling trend: victims of domestic violence frequently become perpetrators or experience social disabilities.

Previous research establishes that adverse childhood experiences—including sexual abuse, physical and emotional neglect, familial mental illness, and instability due to parental divorce or separation—are strongly linked to negative developmental outcomes (Neophytou, 2022). Maxfield (2004) found that chronic childhood trauma increases the likelihood of violent behavior by over 200%, further exacerbating developmental challenges and perpetuating cycles of violence.

Our comprehensive analysis of open-source domestic violence data from Taiwan reveals a significant positive correlation with child violence rates. Using the ARIMA model (5, 1, 0) for time series prediction, we forecast an 8.59% increase in domestic violence in Taiwan over the next three years, with a mean absolute percentage error (MAPE) of 8.25%, maintaining overall prediction accuracy within 10%. Notably, during the COVID-19 pandemic (2019-2021), cases of child violence surged by 20% and remain elevated.

Furthermore, we leverage electrocardiogram (ECG) and heart rate analysis to detect emotional changes in victims, facilitating early intervention and prevention of further victimization. This interdisciplinary approach integrates engineering and medical technologies, advocating for a proactive social and medical focus on prevention and early treatment to reduce recovery time and minimize hospital visits.

Biography

Yu-chun Lin is currently pursuing a Master of Medicine degree at the Institute of Medicine, Chung Shan Medical University, Taiwan. Her research interests include child psychiatry, Electrocardiogram (ECG), Electromyography (EMG), arrhythmia, medical engineering, human signals, and machine learning.

DAY 1 (IN-PERSON)

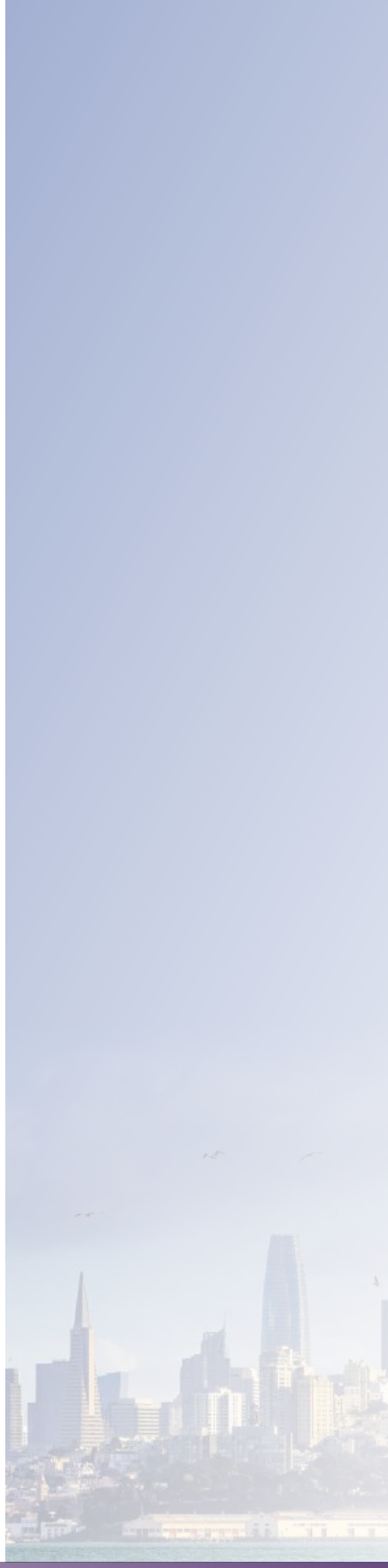
Joint Event

Neurology, Addiction and **Dementia**

World Conference

September 4-6, 2024

California, USA



POSTER PRESENTATIONS

The Effectiveness of Mobile Application "STROKE HELP" in Post-Stroke Rehabilitation

Rasulova Dilbar*

Department of Neurology and Medical Psychology, Tashkent Medical Academy, Uzbekistan

The basis of stroke rehabilitation emphasizes the crucial importance of timely intervention and unwavering support from loved ones. The recovery process spans years and involves extensive relearning for patients. This study aimed to assess the efficacy of the mobile application "STROKE HELP" in facilitating the recovery of movement disorders post-stroke.

Between 2021 and 2023, 214 stroke patients with movement disorders were evaluated at the Department of Neurology and Intensive Neurology, Tashkent Medical Academy. Patients were categorized based on stroke laterality: 123 (57.4%) had left-sided strokes, and 91 (42.5%) had right-sided strokes, with a mean age of 64.8 ± 1.1 years. Initial assessments utilized the NIHSS scale during the acute phase, followed by monitoring using the FMA scale at 3-, 21-, 40-, and 60-days post-stroke.

A prototype of the mobile application "STROKE HELP" was developed in Uzbek, focusing on stroke rehabilitation. Patients were divided into two groups: Group 1 utilized the application "Insultga Yordam", while Group 2 did not due to various reasons. Analysis revealed that patients in Group 1 exhibited significantly better FMA scores, showing a 30% improvement compared to Group 2 during movement disorder rehabilitation.

Conclusions: The findings highlight the efficacy of "Insultga Yordam" in restoring motor function in stroke patients, starting from the acute phase in intensive care units.

Biography

Rasulova Dilbar was born in Tashkent City, Uzbekistan, on September 17, 1965. She graduated from high school with a gold medal in 1982 and subsequently enrolled in medical school at Tashkent State Medical University, where she graduated with honors in 1988. Following a one-year internship in neurology in 1990, she completed a two-year clinical residency in neurology from 1994 to 1996. With 36 years of experience as a neurologist, she has been teaching at the Department of Neurology of the Tashkent Medical Academy since 2002. In 2007, she defended her PhD thesis on "Hypoxic-ischemic encephalopathies" and is currently pursuing her DsC dissertation. Since 2018, she has served as an assistant professor at the Department of Neurology and Medical Psychology, Tashkent Medical Academy.I work on the synthesis of different materials for different applications. Bio-scaffold for bone regeneration, biosensors, drug delivery systems, and water desalination membranes.

Machine Learning-Based Papilledema Detection Leveraging the Quantification of Optic Disc Margin Clarity

Robert W. Enzenauer3*, Paul Chong1, Sarah J. Miller 2

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3Children's Hospital Colorado, Anschutz Medical Campus, University of Colorado School of Medicine, Aurora, USA

Optic disc margin blurring is a critical indicator of papilledema. This study introduces a machine learning (ML) approach to quantify optic disc margin clarity for papilledema detection. Using a publicly available fundus photograph dataset, transfer learning was applied with a VGG-19 model. Computer vision techniques were employed to quantify optic disc margin clarity and enhance model interpretability. Image segmentation methods facilitated the automatic detection and orientation of optic disc centers. The VGG-19 model achieved 92.8% accuracy in classifying normal optic discs, pseudo papilledema, and papilledema. Edge detection analysis demonstrated significant differences in optic disc margin clarity among the three classes ($p < .001$). ML models utilizing extracted metrics achieved 94.7% classification accuracy. This approach establishes thresholds for clinically significant papilledema detection, bridging deep-learning image analysis with practical clinical applications.

Biography

Dr. Robert W. Enzenauer is the Chief of Pediatric Ophthalmology and the Director of the Pediatric Ophthalmology & Strabismus Fellowship at the University of Colorado Anschutz Medical Campus. Dr. Enzenauer is the Immediate Past Chief of Ophthalmology at The Children's Hospital Colorado and served as Brigadier General and Assistant Adjutant General for Space and Missile Defense with the Colorado Army National Guard (retired).

Understanding the Toxic Effects of Polystyrene Nanoparticles in Primary Astrocytes and Neurons: Oxidative Stress

Kamil Adamiak1*, Marta Sidoryk-Węgrzynowicz1, Lidia Strużyńska1

1Laboratory of Patho neurochemistry, Department of Neurochemistry, Mossakowski Medical Research Institute, Polish Academy of Sciences.

The continuous increase in plastic production and use, estimated at 33 billion tons by 2050, has created a serious environmental crisis, highlighting the need to understand the effects of plastic pollution, particularly its potential impact on human health. Under the influence of physical forces, plastic waste disintegrates into nano- and microparticles (NPs and MPs). Particulate matter is known to exert toxic effects in biological systems due to its high reactivity. Therefore, although plastics are considered biochemically inactive and relatively non-toxic, their nanoparticulate form may pose a health risk. Polystyrene (PS) is one of the most widely used plastics, making polystyrene nanoparticles (PS-NPs) valuable model particles to understand cellular uptake and biological effects in in vitro studies.Evidence shows that exposure to PS-NPs increases oxidative stress markers, including reactive oxygen species (ROS). However, the observed effects are variable and depend on particle size, concentration, and exposure time, indicating a complex relationship between NPs and cells. The toxic effects of nano plastic, particularly neurotoxic effects, remain unclear and require detailed research. Therefore, the aim of this study was to investigate the effect of PS-NPs in primary astrocytes and neurons with a particular emphasis on oxidative stress.Cells were cultured in a complete growth medium with appropriate supplements and then exposed to PS-NPs in a concentration range of 1, 25, and 50 µg/mL at different time points (24, 48, and 72 hours). The size distribution and shape of the NPs were determined using transmission electron microscopy. The nanoparticles were spherical, uniform in size (approximately 25 nm), and did not aggregate in the solution. The cytotoxic effect of PS-NPs was assessed using the LDH assay, revealing significant concentration- and time-dependent increases in enzyme release in both cell types, with neurons being more susceptible than astrocytes. A significant increase in ROS levels was observed in both cell types exposed to PS-NPs compared to the control group. ROS, if unbalanced with cellular antioxidant systems, can lead to cell damage and death. Therefore, total antioxidant capacity (TAC), reflecting an overall level of antioxidants activated in response to exposure to PS-NPs, was measured. Additionally, the expression of selected antioxidant enzymes such as superoxide dismutase (SOD) and catalase (CAT), as well as the level of glutathione (GSH), the major non-enzymatic antioxidant involved in mitigating ROS-induced cell injury, were examined. The results indicate damage to the antioxidant defense system, which, combined with increased ROS production, may result in oxidative stress.

In summary, after entering neural cells such as astrocytes and neurons, PS-NPs exhibit a cytotoxic effect, largely related to oxidative stress. Although oxidative stress appears to be the main mechanism underlying the neurotoxicity of PS-NPs, other mechanisms are not excluded and require further investigation, particularly in the context of various physico-chemical characteristics of the NPs.

The study was financed by the National Science Center, grant no 2021/41/B/NZ7/02183.

Biography

Kamil Adamiak holds a master's degree in medical Analytics from the Pomeranian Medical University in Szczecin, Poland (2021). With a solid foundation in laboratory diagnostics, he obtained qualifications as a laboratory diagnostician. In 2022, he began his PhD studies at the Center for Postgraduate Medical Education in Warsaw (CMKP). The PhD program is conducted at Mossakowski Medical Research Institute, Polish Academy of Sciences in Warsaw, where he researches the neurotoxicity of polystyrene nanoparticles in both in vitro and in vivo systems.I work on the synthesis of different materials for different applications. Bio-scaffold for bone regeneration, biosensors, drug delivery systems, and water desalination membranes.

Bridging Thrombolysis is Associated with Better Outcomes Compared to Direct Mechanical Thrombectomy in Stroke Due to Internal Carotid Artery Occlusion

Isabel Siow1*, Benjamin YQ Tan2, Keng Siang Lee3, Natalie Ong1, Emma Toh1, Anil Gopinathan1,4, Cunli Yang1,4, Pervinder Bhogal5, Erika Lam6, Oliver Spooner6, Lukas Meyer7, Jens Fiehler7, Panagiotis Papanagiotou8,9, Andreas Kastrup10, Maria Alexandrou8, Seraphine Zubel11, Qingyu Wu11, Anastasios Mpotsaris11, Volker Maus12, Tommy Anderson13,14, Vamsi Gontu13, Fabian Arnberg14, Tsong Hai Lee15, Bernard PL Chan2, Raymond CS Seet2, Hock Luen Teoh2, Vijay K Sharma1,2, Leonard LL Yeo1,2

1Ministry of Health Holdings, Singapore, 2Division of Neurology, Department of Medicine, National University Health System, Singapore 3Department of Neurosurgery, King's College Hospital, UK, 4Division of Interventional Radiology, Department of Diagnostic Imaging, National University Health System, Singapore, 5Department of Interventional Neuroradiology, The Royal London Hospital, Barts NHS Trust, United Kingdom 6Stroke Department, The Royal London Hospital, Barts NHS Trust,United Kingdom 7Department of Diagnostic and Interventional Neuroradiology, University Medical Center Hamburg-Eppendorf, Germany 8Department of Diagnostic and Interventional Neuroradiology, Hospital Bremen-Mitte, Germany 9First Department of Radiology, School of Medicine, National & Kapodistrian University of Athens, Athens, Greece 10Department of Neurology, Hospital Bremen-Mitte, Germany 11Department of Neuroradiology, University Hospital Magdeburg, Germany 12Institute of Diagnostic and Interventional Radiology, Neuroradiology and Nuclear Medicine, University Hospital Knappschaftskrankenhaus Bochum, Germany 13Department of Neuroradiology, Karolinska University Hospital, Stockholm, Sweden and Department of Clinical Neuroscience, Karolinska Institute,Sweden 14Department of Medical Imaging, AZ Groening, Kortrijk, Belgium 15Department of Neurology, Linkous Chang Gung Memorial Hospital,Taiwan

Abstract: Background and purpose: Mechanical thrombectomy (MT) is an effective treatment for patients with internal carotid artery (ICA) occlusion acute ischemic stroke. It remains unclear whether intravenous thrombolysis (IVT) prior to MT confers any benefit or may result in harm. This study compared the outcomes of acute ICA stroke patients who were treated with direct MT versus combined IVT plus MT.

Methods: This multicenter retrospective cohort study included patients who were treated for acute ICA stroke from five comprehensive stroke centers between January 2015 and December 2019. Patients received direct MT or combined bridging IVT plus MT. Primary outcome was favorable functional outcome defined as modified Rankin Scale (mRS) 0–3 measured at on discharge. Secondary outcome measures included mRS at 90 days, mortality and complications such as symptomatic intracranial hemorrhage (sICH), subarachnoid hemorrhage (SAH) and embolism of thrombus to new territories.

Results: Among 352 patients, 178 (50.6%) patients underwent bridging IVT followed by MT and 174 (49.4%) underwent direct MT. The mean±standard deviation age was 69.8±14.6 years, 50.9% were male and median National Institutes of Health Stroke Scale was 16 (interquartile range). Patients who underwent bridging IVT had better functional outcomes (mRS 0-3) on discharge compared to those who underwent direct MT (24.6% vs 38.0%, P=0.025). On multivariable analyses, bridging IVT was not associated with improvement in 90-day mRS score, decreased mortality or difference in rate of complications compared to direct MT. In subgroup analyses, patients with underlying large artery atherosclerosis treated with bridging IVT compared to direct MT had a higher rate of favorable functional outcome at 90 days (33.9% vs. 14.0%, P=0.022)

Conclusions: Bridging IVT is associated with better functional outcomes compared to direct MT in ICA stroke. In the subgroup of patients with large-artery atherosclerosis, bridging IVT may also confer benefit.

Biography

Isabel Siow is a junior resident in Internal Medicine currently practicing in the Singapore General Hospital. She has a keen interest in research and stroke medicine.

Effect of Sex on Outcomes of Mechanical Thrombectomy in Internal Carotid Artery Occlusion: A Multicentre Cohort Study

Noorul Naseema1*, Isabel Siow1, Benjamin YQ Tan2, Keng Siang Lee3, Natalie Ong1, Emma Toh1, Anil Gopinathan1,4, Cunli Yang1,4, Pervinder Bhogal5, Erika Lam6, Oliver Spooner6, Lukas Meyer7, Jens Fiehler7, Panagiotis Papanagiotou8,9, Andreas Kastrup10, Maria Alexandrou8, Seraphine Zubel11, Qingyu Wu11, Anastasios Mpotsaris11, Volker Maus12, Tommy Anderson12,13, Vamsi Gontu13, Fabian Arnberg14, Tsong Hai Lee15, Bernard PL Chan2, Raymond CS Seet2, Hock Luen Teoh2, Vijay K Sharma1,2, Leonard LL Yeo1,2

1Ministry of Health, Singapore, 2Division of Neurology, Department of Medicine, National University Health System, Singapore
3Department of Neurosurgery, King's College Hospital, UK, 4Division of Interventional Radiology, Department of Diagnostic Imaging, National University Health System, Singapore

Recent studies have demonstrated widespread underrepresentation of women in acute stroke clinical trials. Identifying differences in outcome of internal carotid artery (ICA) strokes between males and females may be useful in aiding clinical management. This international multicenter study aimed to determine sex differences in outcomes after mechanical thrombectomy (MT) for patients with acute ICA stroke.

Methods: We performed a retrospective analysis of consecutive patients with ICA stroke who had undergone MT in seven stroke centres across three countries (Germany, United Kingdom and Sweden), between 2015 and 2020. The primary outcome was a favorable functional outcome measured by a modified Ranking Scale (mRS) of 0–3 at 90 days. Secondary outcomes were mRS 0–3 upon discharge, mortality, symptomatic intracranial hemorrhage (sICH).

Results: Among the 239 patients who underwent MT, 109 (45.6%) patients were male and 130 (54.4%) were female. Females were older than males (mean ± SD 72.7 ± 15.2 years vs. 67.0 ± 13.5 years; $p < 0.001$) and had higher rates of cardioembolic aetiology of stroke (53.1% vs 35.5% p= 0.028). More males were smokers than females (21.6% vs 10.3%; p-0.021). Despite these differences, females had better primary and secondary outcome measures compared to males, with higher rates of favorable 90-day mRS scores (OR=2.78; 95% CI 1.33 – 5.81; p-0.007) and favorable discharge mRS scores (OR=2.49; 95% CI 1.25 – 4.98; p=0.010). Rates of complications such as sICH and SAH were comparably low in both groups.

Conclusion: Females achieved comparable functional outcomes compared with males after undergoing MT for ICA acute ischemic stroke.

Biography

Noorul Naseema is currently practicing in Singapore General Hospital as a junior resident. She is undergoing training in Internal Medicine and is interested in research.

The Positive Effect of Spermidine in the Older Adults Suffering from Dementia

Jarisch Reinhart1*, Rohrhofer Johanna2, Untersmayr Eva2, Pekar Thomas3

1 FAZ, Floridsdorf Allergy Center, Austria
2 Institute of Pathophysiology and Allergy Research, Center for Pathophysiology, Infectiology and Immunology, Medical University of Vienna, Austria
3 University of Applied Sciences, Austria

Introduction: The worldwide prevalence of dementia is estimated at 35.6 million and will rise to 115 million by 2050. There is, therefore, an urgent need for wall-founded dementia diagnostics and well-resourced therapeutic options. Previous studies have highlighted that spermidine can trigger the important process of dissolving amyloid-8 plaques by autophagy. They also confirmed that nutritional intervention with the natural polyamine spermidine could prevent memory loss in aging model organisms,2,3 The aim of the research project was to prove that the serum spermidine laval correlates with memory performance and to show a possible improvement of neurocognitive functions when spermidine is taken orally.

Discussion: The results dearly show that oral spermidine intake significantly correlates with the improvement of cognitive performance and, therefore, has a positive effect on it. In both groups, an improved CERAD score was observed after three months. The cohort who received the higher dosage of spermidine (group A) showed an improvement in the groups of participants with mild and moderate dementia. Statistical analysis revealed a significant correlation between the intake of spermidine and the improvement in cognitive performance. In comparison, group B showed consistency or a decrease in cognitive performance. At the beginning, it was assumed that higher cognitive performance is associated with increasing spermidine concentration, as a similar study at the Charito showed that spermidine supplementation increases memory performance. Gupta et al. also confirmed an increase in memory performance in fruit flies with higher spermidine content. However, the expectation that this caso occurred before the intervention was refuted in the analysis of results.

In addition, a significant correlation between the spermidine locals in the proband's sorum and memory performance was detected. A recently published study with a sample size of 3774 also describes a correlation between serum spermidine locals and cognitive impairments. In an evaluation in a care home, 70% of people showed improvement after 2 1⁄2 years.

In conclusion, wo soo, on the one hand, a great therapeutic potential in spermidine supplementation in older adults at risk of dementia and, on the other hand, the possibility for routine cerebral examinations of persons over the age of 60 to detect the risk on the ansat of cognitive disorders. However, further studies are needed - also to check whether the shown positive effect of spermidine on cognitive function is specific or non-specific.

Biography

Professor Reinhart Jarisch, MD, is a distinguished medical professional with extensive experience and contributions in dermatology and allergy research. He completed his medical studies in Denmark and Pontiac, USA, and served as a resident at the 1st Department of Dermatology, University Clinic Vienna, for 20 years. In 1980, he co-founded the Floridsdorf Allergy Center (FAZ) in Vienna with Professor Götz. His notable work includes his thesis on bee venom allergy, the establishment of antihistamine premedication, and successful studies on seasickness with the German Navy and dementia treatment using spermidine. He received the First Poster Prize at the Neurology Congress in Pula in 2023 and was honored with the Clemens von Pirquet Medal for his contributions to allergy research.

Deciphering CNS Demyelination - Insights from a Sole Tertiary Care Centre in Southern India

Mandara Ganganakudige Manjappaiah*

Department of Neurology, National Institute of Mental Health and Neurosciences (NIMHANS), Bengaluru, India

Abstract: Central Nervous System Inflammatory Demyelinating Disease (CNS-IDD) encompasses conditions like Multiple sclerosis (MS), Neuromyelitis Optica Spectrum Disorder (NMOSD), and Myelin Oligodendrocyte Glycoprotein Antibody Associated Disease (MOGAD). Understanding these diseases requires long-term monitoring and follow-up. At our institute, a dedicated database has been crucial in analyzing disease profiles and outcomes, guiding future research in pathophysiology, management, and rehabilitation.

Methodology: We conducted a prospective study involving patients attending the Neurology services at a tertiary University hospital in Southern India.

Results: We enrolled 200 patients with CNS-IDD from February 2022 to August 2022. The mean age was 32.0±11.4 years with a female to male ratio of 2.6:1. Multiple Sclerosis (MS) was diagnosed in 103 patients, AQP4+ve NMOSD in 33 patients, MOGAD in 24 patients, and other CNS-IDD in 40 patients. Among MS patients, 91 were relapsing remitting, 9 secondary progressive, and 3 primaries progressive. The mean age of symptom onset was 26.3±12 years with a mean duration of 5.5 years from onset to diagnosis. Initial presentations included spinal cord (39.5%), optic nerve (31%), and brainstem (14%) involvement. The average number of relapses was 3.1 during the disease course. Rituximab was the most common disease-modifying agent (DMA) used in MS (86 patients), followed by dimethyl fumarate (39), natalizumab (11), and other DMAs (41). In AQP4+ve NMOSD and MOGAD patients, rituximab was used in 75.75% and 50%, respectively, with mycophenolate mofetil and azathioprine as other immunomodulators.

Conclusions: Maintaining a dedicated clinical database provides valuable insights into the clinical features and phenotypes of CNS demyelinating disorders, aiding in optimizing patient care and management outcomes.

Biography

Dr Mandara Ganganakudige Manjappaiah was born in rural Southern India. She received her medical degree from M S Ramaiah Medical College, Bengaluru, India, and currently serves as a Senior Research Fellow in the Department of Neurology at NIMHANS, Bengaluru. Her research focuses on establishing and utilizing a dedicated database for CNS Demyelination patients at NIMHANS. She has contributed to 2 publications and actively participated in organizing World MS Day 2022 at NIMHANS, India.

Subcutaneous Pellet Implant of Naltrexone and Disulfiram Experience in Patients Who Consume Cocaine and Alcohol in 5 Years

Matias Ibanez Diaz*

Clinic Pellet Chile, Chile

Abstract: With more than 5 years of experience and more than 5,000 patients treated, Clinica Pellet Chile decided to develop in Chile a subcutaneous implant of Disulfiram and Naltrexone for the treatment of alcoholic patients, users of cocaine and its derivatives and to a lesser extent opioids. This technology has been tested for approximately 5 years, in which both positive and negative results have been described. The implantation process, its effects and complications are described. In addition to offering as a real possibility of treatment.

Biography

Dr. Matías Ibáñez is a distinguished adult physician and surgeon specializing in adult patient care. With a solid academic background and extensive experience in addiction medicine, Dr. Ibáñez has dedicated his career to improving the quality of life for patients through innovative techniques and medical treatments.

As the Medical Director of Clinica Pellet Chile, Dr. Ibáñez has led numerous clinical research projects, particularly excelling in the development of Disulfiram, naltrexone implants, and other innovative technologies. These implants have proven effective in reducing the consumption of highly addictive drugs, based on successful outcomes observed in the United States and Europe.

DAY 2 (IN-PERSON)

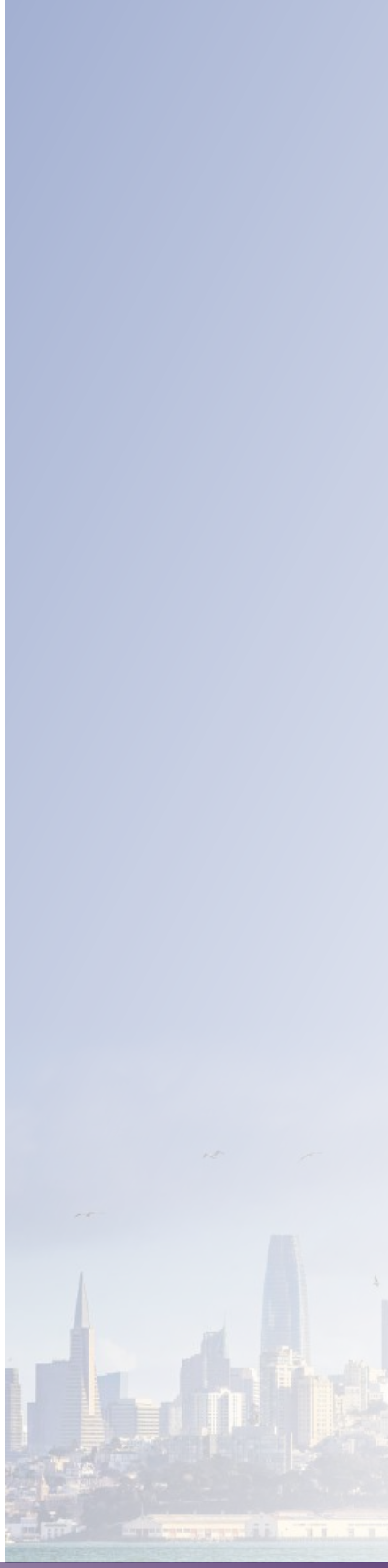
Joint Event

Neurology, Addiction and **Dementia**

World Conference

September 4-6, 2024

California, USA



KEYNOTE SPEAKERS

Holistic Rehabilitation at its Best

Peter P Lyndon-James*

West Australian Shalom Group Inc,Australia

The efficacy of holistic, wellness-based addiction counseling and recovery practices has garnered increasing attention as traditional methods often fall short of addressing the multifaceted nature of addiction. Holistic approaches, which integrate physical, mental, emotional, and spiritual dimensions, offer a comprehensive strategy that acknowledges the complexity of addiction and promotes overall well-being. This abstract examines the core principles, methodologies, and outcomes associated with holistic addiction counseling, underscoring its advantages over conventional treatments.

Holistic addiction counseling operates on the premise that addiction is not merely a physical dependency but a manifestation of underlying emotional, psychological, and sometimes spiritual distress. Consequently, these practices incorporate diverse therapeutic modalities, including but not limited to, psychotherapy, mindfulness along occupational activities, mainly work-based training. The aim is to heal the person, rather than focusing solely on the symptoms of addiction.

Mindfulness-based interventions have been shown to reduce stress, enhance self-awareness, and improve emotional regulation, which are critical in the context of addiction recovery. Studies indicate that mindfulness can decrease the likelihood of relapse by helping individuals manage cravings and develop healthier coping mechanisms. Similarly, work, structured routine and physical exercise contribute to physical well-being and stress reduction, promoting a balanced lifestyle that supports long-term recovery.

Emotional and psychological healing are also central to holistic addiction counseling. Even though we may not label it as such, techniques such as cognitive-behavioral therapy (CBT), dialectical behavior therapy (DBT), and trauma-informed care are integrated to address the root causes of addiction, such as unresolved trauma, anxiety, and depression. These therapies help individuals understand and alter destructive thought patterns, develop healthier behaviors, and build resilience against future stressors.

Spiritually plays a significant role in holistic recovery. Many holistic programs encourage practices like meditation, prayer, and participation in support groups, which can provide a sense of purpose, community, and inner peace. Spirituality can be particularly beneficial for those who feel disconnected or are seeking meaning beyond their addiction.

The efficacy of holistic, wellness-based addiction counseling is supported by growing empirical evidence. Research suggests that individuals who engage in holistic treatment programs experience lower rates of relapse compared to those who undergo traditional methods alone. Holistic approaches are associated with higher levels of resident satisfaction and engagement, likely due to their comprehensive nature and the personalized care they provide.

Furthermore, holistic counseling has been shown to improve various aspects of life quality, including mental health, physical health, and social relationships. By addressing the full spectrum of an individual's needs, holistic practices facilitate a more sustainable and fulfilling recovery process.

In conclusion, holistic, wellness-based addiction counseling and recovery practices present a promising alternative to traditional addiction treatment methods. By addressing the interconnected physical, emotional, psychological, and spiritual dimensions of addiction, these practices offer a more thorough and individualized approach to recovery.

The integration of mind-body techniques, nutritional therapy, psychological support, and spirituality not only aids in the immediate cessation of substance use but also promotes long-term well-being and relapse prevention. As the evidence base grows, holistic approaches are likely to become an increasingly integral part of comprehensive addiction treatment programs, reflecting a shift towards more humane and effective recovery practices.

Biography

Peter is the Founder and CEO of Shalom House, a full-time residential treatment service provider that has a strong focus also on reintegration & resocialization. Shalom assists men, women and families in their efforts to free themselves from addiction as well as other life-controlling issues and is known as Australia's largest holistic, 100% self-funded rehabilitation center.

In and out of institutions/prisons since becoming a ward of the state at the age of nine, Peter has faced a life of crime and drug addiction. After a life-changing experience, Peter broke free from drugs and has been on a mission to save others who find themselves trapped by addiction and other life controlling issues ever since.

After working as a Prison Chaplain, Peter opened Shalom House in 2012. His intention was to mentor, teach and guide men, women & families who battle with any life-controlling issue.

Peter has served as a City of Swan Councilor, representing the Ward of Altone in which he grew up and most recently has run for a seat in the Legislative Council for East Metro in the Upper House.

Peter's efforts and the work done at Shalom House in restoring the lives of men and families in the community has been recognized on many platforms, including personally being named the West Australian of the Year in the Community category and finalist in the Australian of the Year awards along with Commendations from the previous West Australian Police Commissioner and now Governor of Western Australia, Chris Dawson.

Today, Shalom House has 160 residents and over 70 staff, including mentors, administrators and coordinators. There is also an army of volunteers helping to keep the facility running. It receives no Government support or grants, remaining 100% self-funded. For the first 10 years Peter worked as a full-time volunteer as founder/CEO.

Peter gives every waking hour to developing this program which, despite the Covid-19 pandemic in 2020, expanded to include a Women's Program and now Family Services; Shalom House is multi-award winning at local, state and national levels.

With an increasing number of graduates from Shalom, Peter has now set out to educate the community, the families and the addict – teaching them the best way to bring about.

effective change and how to stop the cycle of destruction that drugs cause.

He travels extensively speaking to all levels of society in his area of expertise and will be presenting this year at the 2024 Addiction World Conference in San Francisco.

DAY 2 (IN-PERSON)

Joint Event

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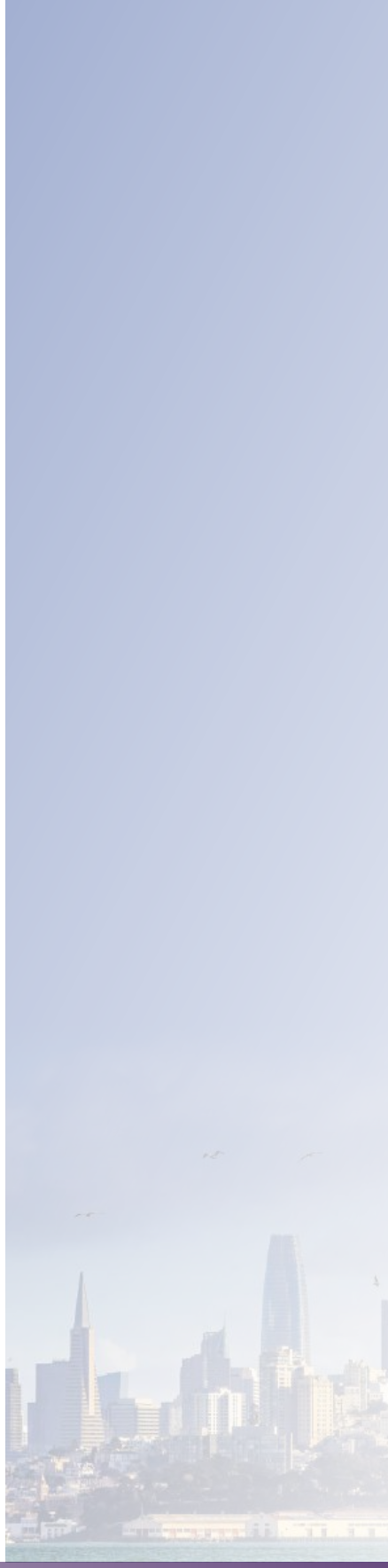

WORKSHOP

Cross the Street and Step into Their Shoes: Connect, Interact, and Communicate with Older Adults

Nancy Brown*

PhD Candidate, University of Edinburgh, Deputy Director for Communications &

Certified Validation Teacher, Validation Training Institute, Israel

Validation is a non-pharmacological method of communicating with older adults living with cognitive decline. Developed in the 1960s by social worker Naomi Feil, the Validation method draws inspiration from Erikson's Developmental Stage Model, Rogers' counseling psychology, and Maslow's Hierarchy of Needs. The Feil method introduced techniques that align with these theories from humanistic psychology and was the first method that put person-centered care into practice.

Validation creates a shared space where the older person can express themselves through dynamic engagement, both verbal and non-verbal. All communication, no matter how irrational it may seem, is considered an expression of the person's internal experience of reality. In this interactive workshop, participants will experience a variety of Validation techniques through role plays and hands-on practice that they can immediately apply to their daily work.

Validation incorporates:

1. A positive philosophy of supportive, multidisciplinary care

2. A behavioral staging model of cognitive impairment

3. Stage-specific communication techniques for both one-to-one and group interactions. The techniques practiced in this workshop are rooted in establishing emotional connectivity and building trusting relationships. Through empathy, the Validation practitioner connects to everyone's personhood, accepts the older person without judgment, listens empathetically, employs emotional and physical mirroring, identifies the emotional undercurrent of their communication, and uses therapeutic.

touch.

This workshop incorporates the following elements:

1. Introduction to Validation, Theory, and Principles

2. Pathway to Empathy: Validation Attitude and Techniques Interactive audience participation through role play and exercises

3. Going Deeper: Validation Techniques for Aggressive Behavior

Develop a deeper understanding of the various reasons for 'bizarre,'

difficult, or aggressive behavior

Questions and Answers:

With increased staffing shortages and limited resources, professionals, caregivers, and families require specialized skills to work effectively with this vulnerable population. Such techniques promote a new culture of dementia care that is inclusive and relevant to all cultural expressions and across a variety of diverse settings.

Biography

Nancy Brown has over 18 years' experience in dementia care in a memory day center serving all levels of cognitive impairment. As a practitioner-researcher and specialist working with older adults living with advanced dementia, she is also a PhD candidate in dementia studies at the University of Edinburgh. She is a Certified Validation Teacher and conducts webinars, workshops, and private consultations for professional staff, volunteers, families, and caregivers along with teaching Validation internationally. Nancy serves as the Deputy Director for Communications of the Validation Training Institute; Communications Chair for the Non- Pharmacological Interventions interest area of Alzheimer's Association International; and Executive Committee member of SDRC (Scottish Dementia Research Consortium).

DAY 2

Joint Event

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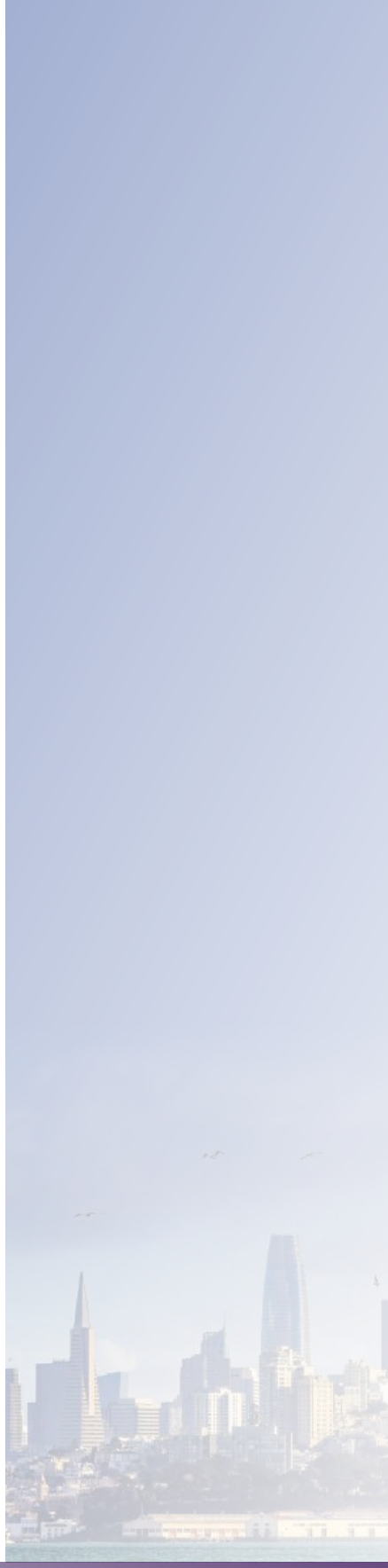
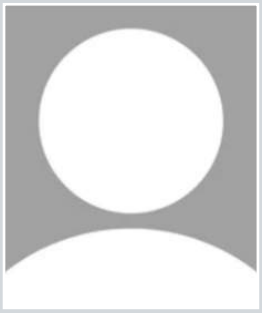


ORAL SPEAKERS



On the Evidence of Things Not Seen a Systems-Driven Analysis of Life Skills Training, University and Tobacco Industry Efforts in School-Based Drug Prevention

Joel Brown*

University of California San Diego, Center for Educational Research and Development (CERD), USA

Background: Despite recent declines, youth nicotine vaping remains seen by experts as a national public health epidemic. Few, if any, researchers have examined how related high-profile and school-based prevention programs such as Life Skills Training (LST) are further disseminated with cooperation from research-to-practice entities as well as the tobacco industry.

Purpose: Provides a systems-driven documentary analysis of efforts pertaining to prevention entities at the University of Colorado, Boulder, as well as LST, and the tobacco industry.

Methods: Employ focused synthesis data collection with constant comparative analyses.

Results: Likely previously unseen and related to LST, is the degree to which prevention entities with a public mission appear to cooperate among themselves and with the tobacco industry as part of a longstanding, if not elaborate, school-based drug prevention social system characterized by patterned evidence of opaque or furtive representations and/or activities.

Discussion: Along with limitations, summarizes a research-to-practice social system likely compromising school-based prevention and, in turn, the health of the young people they serve. Theorizes a symbolic politics explanatory mechanism while providing recommendations toward transparency for more informed school-based prevention decision-making.

Translation to Health Education Practice: Emphasizes the National Commission for Health Education Credentialing Inc. (NCHEC) critical thinking and program evaluation competencies.

Biography

Joel H. Brown, Ph.D., M.S.W., is a researcher/practitioner with internationally recognized experience in prevention science, helping to lead the shift from risk to strengths-focused development through research and application of resilience as a skill set. As a senior scientist with the University of California, San Diego (UCSD) and founding/directing the Center for Educational Research and Development (CERD.org), he has also successfully served as Professor at the University of Oklahoma and San Diego State University, respectively.

With several books, myriad publications in top tier journals and participation on editorial boards such as the Journal of Drug Education, Brown has developed millions in support while leading some of the United States' largest and most comprehensive prevention efforts: this, while collaborating with numerous non-governmental and governmental agencies across the U.S., and with Canadian and European Union (EU) governments, among many.

Brown helped establish resiliency and substance use prevention benchmarks with for example, the federal government's National Center for the Advancement of Prevention (NCAP), San Francisco Department of Public Health, as well as consulting with many agencies such as Aspen Institute and Conrad Hilton Foundation, among others.

Amid myriad keynote and plenary addresses, his findings are shared with audiences ranging from Her Royal Majesty Queen Silvia of Sweden to the New York Bar Association, Heidelberg University, Germany, University of Oslo, Norway, Columbia University, the University of California, Berkeley and Stanford to name a few. His work has been widely discussed by nearly every major media outlet in the U.S., including the New York Times and he has collaborated with the U.S. Congress.

Along with the skills of a clinical practitioner—in addition to his work being recognized by the National Academy of Sciences—he has received numerous awards for this innovative and distinguished research. Brown earned complementary degrees from several Universities of California, in Education (MA, Ph.D.), Medical Social Services (MSW) and Health/Social Psychology (BA), respectively.

Pharmacogenetics of Drug Addiction: Recent Perspectives and Therapeutic Promises

Shawqi H Alawdi*

Associate Professor of pharmacology and therapeutics, Faculty of Medicine, Thamar University, Yemen

Drug addiction is a brain disorder where genetic polymorphisms have been implicated in its development and play significant roles in its treatment. Identification of the susceptibility genes involved in addiction has made several vital leaps thanks to the advances in genome-based clinical and bioinformatics studies. In this presentation, recent pharmacogenomic data engaged in drug addiction will be discussed with an emphasis on emerging discoveries that could play an important role in the prediction and pathogenesis of addiction. Additionally, clinically applicable ideas for addiction treatment will be discussed, including novel therapeutic repurposing of some available drugs that could be useful in addiction therapy.

Biography

Shawqi Alawdi is an Associate professor of pharmacology and therapeutics at the Faculty of Medicine at Thamar University, Yemen. He also works as an associate professor at the Syrian Private University (SPU), Damascus, Syria. He received PhD in pharmacology and toxicology from Cairo University, Egypt. His research interests include drug addiction, drug repurposing, neuroscience, nanotechnology, and pharmacoepidemiology.

3-Point Decline in the MMSE: What Does it Mean in Patients with Verified Alzheimer's Disease and Verified Depressive Disorder

Matthias Riepe*, Karolina Sejunaite, Yosra Belal, Claudia Lanza

Department of Psychiatry II, Ulm University, Germany

Composite cognitive scales are used ubiquitously in diagnostic algorithms, in strategies to appraise severity of cognitive impairment, and in clinical trials. We analyzed the different meanings of decline of three points in the MMSE. It is unclear whether the total MMSE score informs us about the same deficits in different diseases such as Alzheimer's disease (AD) and Depressive Disorder (DD). At least partly, this results from studies, hitherto, that have not secured the diagnoses of AD and DD using biomarkers. In the present study we only analyzed results from patients in whom the diagnosis of AD had been secured with Abeta1,42 and tau-protein. We only analyzed results from patients with DD in whom neurodegeneration was excluded (normal Abeta1,42 and normal tau-protein). We used data from a previously published cross-sectional retrospective observational clinical cohort study. Final analysis included only patients in whom AD biomarker analysis was characteristic for AD (n = 167) and patients with DD in whom AD was ruled out by analysis of biomarkers suggestive of AD (n = 69). The three-point difference between an MMSE score of 30 and 27 in patients with AD is a measure of memory decline while it reflects a decline of diverse cognitive functions in patients with DD. We conclude that the different meanings of decline by any number of points from the total score of a composite scale need to be considered. Sole memory reflects the impact of AD at onset of clinical manifestation. Only memory should be used to assess severity of disease and efficacy of therapeutic interventions in early AD. In early AD, the decline in items beyond memory assessment reflects the impact of comorbidities rather than AD itself.

Biography

After graduating, Matthias served in several positions at the University of Münster and the Humboldt University Berlin (Charité) and Ulm University in Germany, the Center for Research on Occupational and Environmental Toxicology in Portland, Oregon, USA, and at the Wadsworth Center for Laboratories and Research in Albany, New York, USA. He is board certified in Neurology, Psychiatry and Psychotherapy, and Geriatrics. Matthias held positions Full Professor of Old Age Psychiatry at the Charité Medical Faculty in Berlin and currently at Ulm University and Head of the University's Division of Old Age Psychiatry and the Department of Geriatrics and Old Age Psychiatry at Bezirkskrankenhaus Günzburg.

Expressive Arts Therapy and Quality of Life in Those Living with Dementia

John Mondanaro*

Assistant Professor and Director of Expressive Arts Therapy, Brookdale Department of Geriatrics and Palliative Medicine, Icahn School of Medicine, Mount Sinai Hospital, New York

Expression of identity is an essential human experience and quality of life marker that is often diminished in those living with dementia. Myriad symptoms and diminished functionality contribute to this reality. The severe impact of dementia on quality of life moves beyond the physical losses incurred by the disease, but also includes psychosocial impact. The value of individual identity in those living with dementia is often dismissed or even denied in everyday life through institutional and societal objectification. Stigma about the disease and its course heightens anxiety in those newly diagnosed and becomes the lived story of those living with advanced disease. Music therapy and other expressive arts therapies including art therapy, dance-movement therapy, and drama therapy provide unprecedented identity affirming opportunities for individuals living with all stages of dementia. Through these therapies, individual narratives are witnessed and given resonance within a therapeutic relationship. Individuals may experience aspects of themselves that are inextricably linked to core identity and when reinvigorated can transcend the identity of "dementia patient". These therapies can bolster self-esteem, increase functionality physiologically as well as cognitively, and music therapy has been shown to improve neurologic function through its positive role in neuroplasticity. Expressive arts therapies can also positively address caregiver burden often identified in families navigating the care of a loved one with dementia. Support groups across modality can invite release and provide aesthetic framing of challenging circumstances incurred by the care of an individual diagnosed with the disease. This presentation will feature state of the art research, case study, and video of clinical music therapy with an individual diagnosed with dementia.

Biography

John Mondanaro PhD, MT-BC, LCAT, CCLS is an Assistant Professor and Director of Expressive Arts Therapy for the Brookdale Department of Geriatrics and Palliative Medicine in the Icahn School of Medicine, Mount Sinai Hospital. Earning his PhD in Education and MA in Music Therapy from New York University, and BA in Art from Saint Ambrose University, John holds licensure as a creative arts therapist in New York, and maintains dual certification in Music Therapy and Child Life practice. He has written and presented extensively on the arts in healthcare, including co-editing the books, Music and Medicine: Integrative Models in the Treatment of Pain and Covid Chronicles: Music Therapy in Pandemic Times. John's dedication to patient care across the lifespan for over 20 years, earned him Mount Sinai Beth Israel's 2017 Care and Compassion Award and the American Academy of Hospice and Palliative Medicine's 2023 Humanities Award for enhancing palliative care through the arts.

Current Trends in the Development of Alcoholism in Kyrgyzstan

Shakeeva Chynara Asanovna*

Doctor of Psychological Sciences, Kyrgyzstan

Historically, the Kyrgyz culture, as the culture of one of the Central Asian countries, was not widely characterized using strong drinks and alcohol. Among the Kyrgyz, less strong drinks such as bozo, zharma, and kymyz were the most common on holidays and feasts. However, the emergence of a new socio-economic formation and interpersonal relationships gave rise to a new culture of leisure, interpersonal communication, which increasingly began to include new interpersonal forms and new types of leisure, including behavior. Starting from the 40s-50s, new, hitherto unknown forms of cultural feasting began to arise. Modern forms of leisure development have appeared, especially with alcohol consumption.

Undoubtedly, this had great negative consequences for lifestyle, family, and friendly relationships. New cultural relations have not yet been formed in the social environment, which would have introduced interesting forms of enriching interpersonal relationships in human communication. Unfortunately, the increase in alcohol consumption has led to the development of family violence and aggressive forms of mutual relations.

Biography

Shakeeva Chynara Asanovna is a Doctor of Psychological Sciences. She is a full member (academician) of the Academy of Pedagogical and Social Sciences of the Russian Federation (1998), Academician of the International Aitmatov Academy (1999), and Professor Emeritus at the University of Oxford, England (2010).

Antidepressants and Memory Effects of Ketamine under the Neuromolecular View: A Literature Review

Da Silva GP Felipe1*, Rezende M Gabriel2, Lohana Pompelli Scapatici1, Luísa Zanelatto de Araujo1, Bruna Carrara Lombardi1, Caroline Vidal1, David Batista Wiedmer1, Lucas Schoeler1, Minhoto R Gisele1 and Andreatini Roberto3

1School of Medicine and Life Sciences, Pontificia Catholic University of Paraná – PUCPR, Brazil
2Department of Medicine, Federal University of Paraná, UFPR, Brazil
3Department of Pharmacology, Biological Sciences Sector, Federal University of Paraná, Center Polytechnic, UFPR, Brazil

Objectives: Major Depressive Disorder (MDD) has as diagnostics characteristics chronic deep sadness, anhedonia, sleeping disorder, lower energy, and cognition impairment like memory deficits. Among the pharmacological treatments that have been used until now, most of them act by monoaminergic pathways. Overall, the antidepressant effects promoted by this kind of medication usually delay starting, resulting in treatment resistance by the patients; moreover, in some cases, this kind of treatment has shown to be inefficient in depression remission. With this, new medicines have been studied for resistant cases and an immediate antidepressant effect, for example, ketamine – whose action occurs in glutamatergic pathways. This study aimed to analyze, from a literature review, the molecular mechanisms involved in the action of ketamine - focusing on the neuroplastic hypothesis of depression.

Methods: A literature search was conducted in PubMed, MEDLINE, and SciELO databases using the following terms as descriptors: "ketamine AND depression AND Neuroplasticity," with criterion PICO, resulting in 60 bibliographic texts.

Results/Discussion: The studies analyzed demonstrated that ketamine could exert its antidepressant effects through the inhibition of GABAergic interneurons, activation of TRK-B/AKT/mTORC pathways involved with cell survival/growth through the neurotrophins BDNF, and increased activation of AMPAr by glutamate. Furthermore, it is evident that the pharmacodynamics of ketamine involves different molecular cascades present in the impaired neural plasticity pathways in individuals with MDD.

Conclusion: Thus, more research on the effectiveness of ketamine is needed to consolidate its use in MDD and to evolve with glutamatergic pharmacological therapy for other mental disorders, such as bipolar and neurodegenerative affective disorders, an example of Alzheimer's disease.

Biography

Felipe Paes Gomes da Silva has been a medical student at the Pontifical Catholic University of Paraná (PUC-PR) since 2019/2. I have had the privilege of serving as the president of the Research Center (NUPEC) of IFMSA Brazil (International Federation of Medical Students Association - Brazil) and working as a monitor in Medical Immunology. Currently, I am a student in the Experimental Pathology Laboratory research group of the Pontifical University Catholic Church of Paraná (PUC-PR). My interests lie in Psychiatry, Neurology, Pathology, and Immunogenetics. I have authored four articles, all published in international journals, and have 43 citations, with an H index of 2. I have presented at the International Congress by Neurology in Paris and eight other congresses in Brazil, earning the third position award in the largest congress of students in the south of Brazil. Congress of students in the south of Brazil.

The Role of NRF2 in Cerebrovascular Protection: A Potential Therapeutic Target for Vascular Cognitive Impairment and Dementia (VCID)

Yizhou Hu*

Department of Internal Medicine, University of Pittsburgh Medical Center (UPMC), USA

Vascular cognitive impairment and dementia (VCID) is an age-related neurodegenerative disorder and the second most common cause of dementia. The prevalence of VCID increases with age, and it is a major public health concern due to the lack of effective treatments and the high cost of care. The key pathophysiology of VCID is hypoperfusion caused by vascular dysfunction. Aging and vascular diseases are the most important risk factors for VCID. Cerebrovascular aging leads to the deterioration of vascular function at different levels, particularly in the structural components of the blood-brain barrier (BBB). This disruption impairs the exchange of nutrients and metabolic waste products, contributing to neurodegeneration. White matter injury, characterized by white matter hyperintensities on MRI scans, is also common in VCID and negatively affects cognitive function. Aging-related DNA damage, neuroinflammation, and mitochondrial dysfunction further contribute to the development and progression of VCID.

Nuclear factor erythroid 2-related factor 2 (NRF2) is a transcription factor that plays a crucial role in protecting against oxidative stress and inflammation. NRF2 activation has been shown to have diverse beneficial effects in cerebrovascular components, including endothelial cells, vascular smooth muscle cells, pericytes, and perivascular macrophages. In endothelial cells, NRF2 activation improves blood-brain barrier integrity, reduces inflammation, enhances neurovascular coupling, and promotes angiogenesis. In vascular smooth muscle cells, NRF2 activation suppresses abnormal proliferation and migration, thereby maintaining cerebral blood flow. In pericytes, NRF2 activation helps maintain blood-brain barrier integrity and regulates cerebral blood flow. In perivascular macrophages, NRF2 activation modulates the inflammatory response and aids in the clearance of metabolic waste products, such as amyloid beta.

In conclusion, NRF2 activation represents a promising therapeutic target for VCID due to its protective effects in the cerebral vasculature and its potential to mitigate the aging process. Further research, including preclinical and clinical trials, is needed to fully understand the therapeutic potential of NRF2 activators in VCID and to develop effective treatment strategies.

Biography

Dr. Yizhou Hu is a dedicated Internal Medicine resident at UPMC McKeesport. He earned his MD from Zhejiang University School of Medicine. Dr. Hu has contributed to the field through his publication in the International Journal of Molecular Science. As an emerging physician, he is committed to delivering high-quality patient care and advancing his medical knowledge. Outside of his professional endeavors, Dr. Hu is an animal lover and has adopted two rescued cats. His passion for medicine and compassionate approach to both patients and animals define his multifaceted career and personal life.

Post-infectious Spermidine Levels Remain Reduced Over a Prolonged Time Period After Viral Infections

Jarisch Reinhart1*, Rohrhofer Johanna2, Untersmayr Eva2, Pekar Thomas3

1 FAZ, Floridsdorf Allergy Center, Austria
2 Institute of Pathophysiology and Allergy Research, Center for Pathophysiology, Infectiology and Immunology, Medical University of Vienna, Austria
3 University of Applied Sciences, Austria

Introduction: Post-infectious diseases such as Long-COVID and Myalgic encephalomyelitis/chronic fatigue syndrome (ME/CFS) affect millions of patients and represent a worldwide healthcare problem. Currently, there is no biomarker for the diagnosis and due to the lack of knowledge about disease mechanisms, no causative treatment is available. Upon infection, SARS-CoV-2 is known to modulate cellular metabolism and reduce autophagy—accordingly, compound-driven induction of autophagy limits SARS-CoV-2 propagation. Spermidine is known to enhance autophagy in brain tissue. Of interest, Spermidine, given to a culture of corona viruses, can inhibit the release of infectious SARS-CoV-2 particles by 87%. We therefore speculated that a low level of spermidine could be a typical laboratory marker for post-viral ME/CFS and Long COVID patients.

Material and methods: We measured spermidine levels in serum samples from patients, who developed ME/CFS after EBV infection (n=16), Long COVID patients (n=30), patients fully recovered after SARS-CoV-2 infections (n=30) and compared the results with healthy persons (n=30). Spermidine levels were measured using the ELISA- Kit from abbexa®.

Results: We measured significantly reduced spermidine levels in samples from patients fully recovered after SARS-CoV-2 infections compared to healthy controls. Samples from this group were collected in median 119 days after infection. Our data indicate a long-term impact of viral infections on systemic spermidine levels.

Discussion: As the biogenic amine spermidine is mandatory for normal brain function, the reduced sperminide levels might impact on post-viral disease development.

Literature:

1) SARS-CoV-2-mediated dysregulation of metabolism and autophagy uncovers host-targeting antivirals

2) The positive effect of spermidine in older adults suffering from dementia: First results of a 3-month trial.

3) The positive effect of spermidine in older adults suffering from dementia after one year.

Biography

Professor Reinhart Jarisch, MD, is a distinguished medical professional with extensive experience and contributions in dermatology and allergy research. He completed his medical studies in Denmark and Pontiac, USA, and served as a resident at the 1st Department of Dermatology, University Clinic Vienna, for 20 years. In 1980, he co-founded the Floridsdorf Allergy Center (FAZ) in Vienna with Professor Götz. His notable work includes his thesis on bee venom allergy, the establishment of antihistamine premedication, and successful studies on seasickness with the German Navy and dementia treatment using spermidine. He received the First Poster Prize at the Neurology Congress in Pula in 2023 and was honored with the Clemens von Pirquet Medal for his contributions to allergy research.

DAY 2

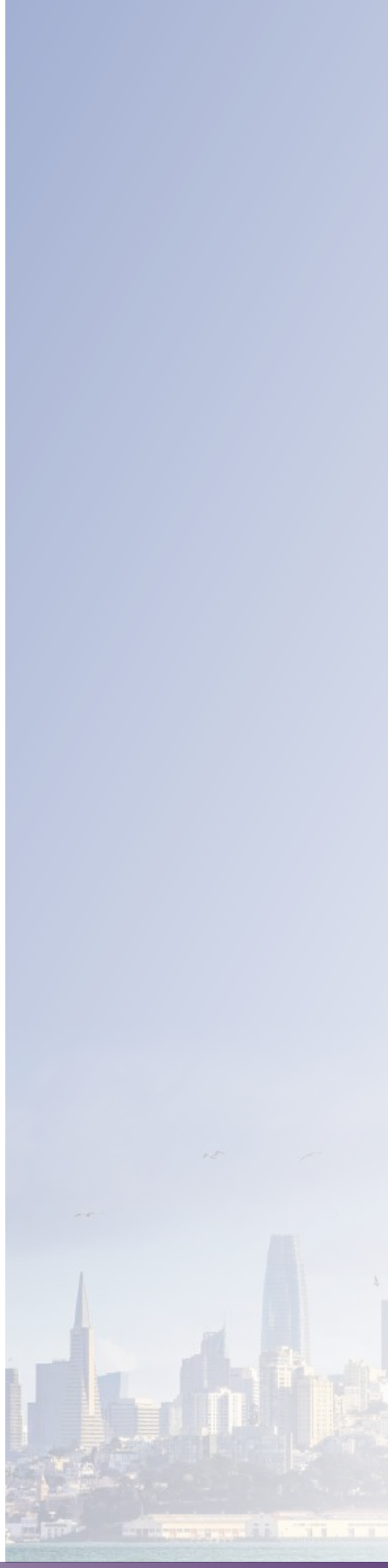
Joint Event

Neurology, Addiction and **Dementia**

World Conference

September 4-6, 2024

California, USA



KEYNOTE SPEAKERS

Preclinical Efficacy Studies on the Multi-Target Candidate DL0410 for Alzheimer's Disease Treatment

Ailin Liu*

Institute of Materia Medica, Chinese Academy of Medical Sciences and Peking Union Medical College, China

Alzheimer's disease (AD) has become a serious disease that endangers the health of the elderly, and there is currently no ideal treatment drug available. Due to the complex pathogenesis of AD, it is difficult for single target drugs to achieve ideal therapeutic effects, while the idea of multi-target and multi-pathway combined action is a new direction for novel drug development for complicated disease AD treatment.

DL0410 (1,1 '- ([1,1' - biphenyl] -4,4 '- diyl) bis (3- (piperidin-1-yl) propan-1-one) dihydrochloride), also known as diphenyl pyridine, is a novel candidate drug with a novel structure and unique action based on computer-aided design, structural optimization, and functional model evaluation. A series of in vivo and in vitro AD related pharmacological evaluation models were established to systematically evaluate the efficacy and mechanism of action of DL0410.

The studies on the drug targets in vitro showed that DL0410 exerted significant activity on H3R, but also displayed activities on AChE and BuChE. The efficacy results of the nematode anti-aging model show that DL0410 can significantly prolong the lifespan of nematodes. The efficacy results on AD animal models, including SAMP8 mouse model, APP/PS1 transgenic mouse model, D-galactose-induced aging rat model, D-galactose-induced aging mouse model, and scopolamine induced learning and memory impairment mouse model, showed that DL0410 can significantly improve the learning and memory ability of AD animal models, improve cognitive level, and the therapeutic effect is mostly better than the positive drug donepezil.

The studies on the mechanism of action suggested that DL0410 can exert anti-AD effects by improving blood-brain barrier damage, promoting neuronutrition, reducing neuronal loss, improving mitochondrial function, improving oxidative stress, improving neuroinflammation, and improving synaptic structure and functional plasticity. Therefore, DL0410 is a promising candidate against AD.

Biography

Dr. Ailin Liu, a professor, has been working for the Institute of Materia Medica, Chinese Academy of Medical Sciences since 1995. She mainly engages in drug discovery against neurodegenerative diseases, and anti-infection disease. Dr. Liu has taken charge of more than 20 national projects and participated in multiple national projects. Based on these projects, more than 170 research papers have been published, more than 50 patents have been applied for, and obtained five rewards for scientific and technological achievement.

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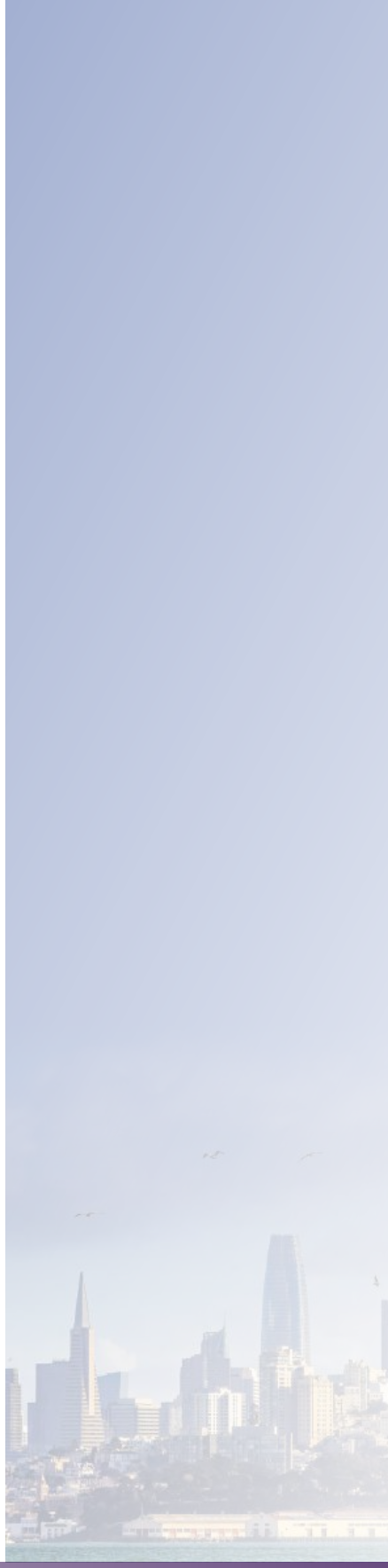


ORAL SPEAKERS

Exploring the Lived Experiences of Individuals with Dementia and Care Partners' Perceptions of Sensory Gardens

Anita Rutendo Chonzi*

Department of Health, Wellbeing & Life Sciences, University of Sheffield Hallam, UK

Background: Natural environments such as gardens have been reported to support residents' health and well-being. For older adults, the effects of staying indoors meant engagement with the outdoors was impeded. However, the outdoor environment remains underutilized and increased evidence is required on the design of outdoor spaces and how this could potentially support increased access. This can be achieved by involving those who use these environments to share their views.

Literature: While there is increasing interest in the design and outcomes after using the gardens, such as mood swings and behavioral changes, this uneven focus neglects users' perceptions of sensory gardens on the well-being of those living with dementia in care homes. A considerable number of studies have been conducted in different settings, such as recreational centers, day centers, local communities, and care homes. However, a limited number of involved people living with dementia. The importance of involving residents in the design and delivery of interventions that concern them is paramount.

Aims: This project aims to explore the lived experiences of individuals with dementia and their care partners' perceptions concerning their use of sensory gardens. To understand the impact on well-being and explore any benefits or challenges.

Rationale: In the absence of a cure, multi-sensory stimulation interventions are being used to promote well-being. Currently, there is a Policy push focusing on well-being, especially for people living with dementia. In Residential care homes, the perceptions of people living with dementia and care partners on sensory gardens are yet to be realized. The study will adopt an approach that puts forward the voices of participants.

Methodology: This study draws on qualitative research with an exploratory and interpretive design. It also adopts an Interpretive Phenomenology Analysis (IPA) approach to gain deeper insights into first-hand experiences. The participants are people living with dementia and their care partners.

The study's findings will inform practice through guidelines, appreciation of co-production, and increasing the visibility of individuals living with dementia within theoretical literature. Finally, the study will support changes in policy by informing care home organizations, local councils, and other organizations about the use of sensory gardens.

Equality, Diversity and Inclusion: The study is universal and gender-neutral, making it inclusive. It will involve diverse perspectives: anyone living in a residential care home with dementia, their family members or friends and their formal caregivers aged 18 years and over. The study is an Interpretive Phenomenological Analysis (IPA), which focuses on first-person account and individual experiences. Interviews are analyzed from a hermeneutic perspective, enabling participants to voice their opinions. IPA provides each participant with equal opportunities to make their voice heard.

Biography

Anita Chonzi is a full-time 3rd-year PhD student in Health, Well-being and Life Sciences at Sheffield Hallam University (SHU). She is also an active member of the Yorkshire Consortium for Equity in Doctoral Education (YCEDE) Scholars Board, which aims to improve the access and participation of BAME students in postgraduate research studies across Yorkshire. Her research interests are in multi-sensory stimulation, which is the activation of all senses to maintain healthy well-being, and the use of Interpretive Phenomenological Analysis (IPA) methodology to give voice to those underrepresented, in this case, people living with dementia.

Developed a Textile Based Program as Art Therapy for Patients of Mental Health

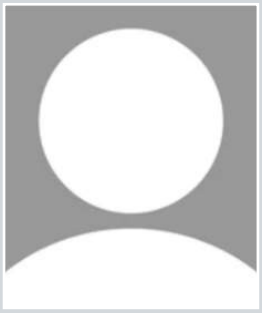
Nouf Abdullah Alsuwaida*

The University of Ha'il, Saudi Arabia

The study investigates the experiences of patients who attend art therapy sessions. The researcher developed a textile-based program in 2023 with six patients in one Mental Health Hospital in Saudi Arabia. The study uses Dewey's theory of learning by helping patients learn a new skill, explore emotions, mitigate stress, and help eliminate anxiety and depression. The researcher gives learners one simple heritage motif as a source inspiration to design from. Then, learners explore the use of technology tools to use colors for textile design and teach them the way of weaving to be able to create artwork by balancing action and reflection individually. The research design is a qualitative case study method, and data is collected through observation to identify the result of the patient's emotions after teaching the textile process. Thus, Recommendations are given for practical ways other Art and Design faculty can also build courses that promote student of mental health engagement and interactions using art therapy.

Biography

Nouf Alsuwaida is an associate professor at the University of Ha'il in Saudi Arabia. Her doctoral studies focus on Educational Learning Technologies in the field of Art and Design at New Mexico State University in the United States. Nouf's teaching experience includes fashion design, architecture & heritage motifs, and the history of textiles, social media in arts. Her research interests are in women's education issues, women's traditional clothing, teaching and learning in fashion design, art therapy, curriculum& instruction, E-learn and distance education, and technology theories in pedagogy.



Recent Advances in Gene Therapies- Changing the Trajectory of Neuromuscular Disorders.

Asmaa M. Abd

Geetanjali Rathore, MD*

1Department of Pediatrics and Neurosciences, University of Nebraska Medical Centre, Omaha, Nebraska, USA

Recent advances in gene therapies are revolutionizing the field of neuromuscular medicine. Until very recently, there were no disease-modifyingtherapies, and the patients relied only on supportive care. The progressive nature of these disorders led to anticipated trajectories of declining strength and function, ultimately being fatal without life-supportive measures. Novel gene therapies are now changing this trajectory with exciting positive results. These gene therapies have shown tremendously promising clinical data in treating potentially fatal neuromuscular conditions like Spinal muscular dystrophy (SMA), Duchenne muscular dystrophy (DMD), and Amyotrophic lateral sclerosis (ALS). However, there are many challenges including the cost of the drug and side effects from a live viral vector. SMA was the first neuromuscular disorder with an approved gene therapy that was shown to be safe and effective. The dramatic response in the most severe types of SMA patients is extremely encouraging, showing ventilator-free survival, normal motor milestones, independent feeding, and acquiring speech. Gene therapy for DMD is more recent and has shown increased dystrophin expression and improved motor scores. ALS which leads to rapid decline in strength, paralysis, and death within a few years of diagnosis, now has an approved gene therapy which has been shown to slow progression and improve the quality of life of these patients. Even though these are only a few examples of potential gene therapy targets, they are very relevant as they open a whole new avenue for development of gene therapies for fatal neuromuscular disorders to provide lifesaving therapy.

Biography

Department of Pediatrics and Neurosciences, University of Nebraska Medical Centre, Omaha, Nebraska, USA.

Quantitative Measurement of Nutritive Sucking in Infants: A New Approach to Neurological Assessment

Neil Buist*

Oregon Health & Science, USA

Feeding difficulties in infants often serve as early indicators of potential neurological issues, yet their quantitative evaluation remains challenging, typically reliant on subjective clinical assessments. This presentation introduces a novel device designed to capture continuous sucking pressures during feeding, thereby quantifying several oral physiological parameters relevant to sucking behaviour. While the device itself isn't conceptually new, its application involves an automated computerized data processing and analytical program [Lang], facilitating objective assessment.

Using a standard angled infant feeding bottle with a modified nipple containing a 12cm pressure chamber, the device records continuous data fed to a computer. Caregivers hold infants during testing, allowing for real-time monitoring. Results are analysed visually or through computer-generated quantitative programs akin to EKGs or EEGs. This method enables early detection of behavioural abnormalities, supports ongoing monitoring for diagnostic improvements, and assesses intervention efficacy over time.

Biography

Professor Buist obtained his medical degrees in Scotland and pursued further training in Biochemical Genetics in Denver, Colorado. Over his career spanning 35 years, he established and led the largest Metabolic Clinic in the US, overseeing numerous clinical and research projects that identified multiple new genetic disorders. He played a pivotal role in pioneering Newborn Screening programs, introducing several innovative diagnostic tests. His contributions extend to developing advanced nutritional products for treating inborn errors of metabolism and co-developing the specific device highlighted in this presentation. Internationally recognized, Professor Buist has published over 150 articles in esteemed research journals and has contributed to crisis interventions in Asia and Africa.

Noninvasive Brain Stimulation via Transcranial Pulse Stimulation: Principles and Perspectives

Ali Riza Günes1*, M. Beglau1, Dr. M. Köhne1, Prof. U. Sprick1

1Center for Neurostimulation, Alexius/Josef Hospital, Neuss, Germany

Background: Transcranial Pulse Stimulation (TPS) is a new non-invasive, CE-certified, and MR-tracked brain stimulation method using ultra-short ultrasound waves. This technique can improve cognitive performance through mechanical transduction, particularly in Alzheimer's disease (AD).

Methods: This case series evaluates the safety and effectiveness of TPS in patients with AD at various stages and in off-label indications such as depression and atypical dementia. TPS uses ultrashort ultrasound pulses in the microsecond range to act on mechano-sensitive channels of the nerve cell membrane, leading to changes in neurotransmitters and the release of growth factors by stimulating neuronal networks. Animal experiments have shown that TPS can activate microglia and reduce plaque. Patients received six therapy sessions within two weeks and a follow-up session after six weeks, using an energy quantity of 0.2 mJ/mm² per pulse with a total of 6000 pulses per session at a frequency of 4 Hz. 3D navigation based on MRI images was used for individual pulse application with the Neurolith device from Storz Medical. The Stroop test was used to assess executive function.

Results: Approximately two-thirds of the AD patients maintained or improved their pre-test levels, and full remission was achieved in therapy-resistant depressive patients. No long-term side effects were observed.

Conclusion: TPS can improve cognitive deficits in AD, depression, and atypical dementia without any observed long-term side effects. Further studies with larger samples are necessary to confirm these findings.

Biography

Dr. Ali Riza Günes studied Medicine at the University of Dusseldorf/Cologne and graduated as MD in 2012. He joined the research group of Prof. P. Berlit at Krupp Hospital, Essen, and completed his doctoral thesis on vascular diseases in 2018. He received board certification for Neurology in 2019 and completed his psychiatric fellowship at University Hospital Dusseldorf, receiving board certification in 2022. Since then, he has been a consultant at the Center for Neurostimulation of Prof. U. Sprick at Alexius/Josef Hospital. Dr. Günes has published research articles, written chapters for neurological textbooks (SOPs Neurology), and presented posters and oral speeches at national and international neurological congresses.

An Answered Call for Aid? Cannabinoid Clinical Framework for the Opioid Epidemic

Krista Hammaker1*, Nathaniel Weathington 2 3, Joseph Maroon2 4, Lawton W Tang2 5, Brian Donohue 2 6, Rachel Yehuda 2 7, Kenneth M Ford 2 8, Myro Figura2 9, Ben Kelmendi2 10, Belinda Tan2 11, Matthew W Cook2 12, Steven D Factor 2 13, Laura Lagano 2, Henry Patrick Driscoll 2, Adam S Howe 2 14, EunBit G Cho 2, David M Rabin15

1College of Medicine, Northeast Ohio Medical University, Rootstown, OH, 2The Board of Medicine, Pittsburgh, USA., 3University of Pittsburgh Medical Center, USA., 4University of Pittsburgh Medical Center, USA., 5Huntington Hospital, CA, USA., 6University of Pittsburgh Medical Center, USA., 7Icahn School of Medicine at Mount Sinai, USA., 8Institute for Human, and Machine Cognition (IHMC), USA., 9University of California Los Angeles, USA., 10Yale University, USA., 11People Science, USA. 12BioReset Medical, USA., 13 Abington Neurological Associates,USA. 14 Albany Medical Center, USA. 15The Board of Medicine,USA

Background: The opioid crisis continues in full force, as physicians and caregivers are desperate for resources to help patients with opioid use and chronic pain disorders find safer and more accessible non-opioid tools.

Main body: The purpose of this article is to review the current state of the opioid epidemic, the shifting picture of cannabinoids, and the research, policy, and current events that make opioid risk reduction an urgent public health challenge. The provided table contains an evidence-based clinical framework for the utilization of cannabinoids to treat patients with chronic pain who are dependent on opioids, seeking alternatives to opioids, and tapering opioids.

Conclusion: Based on a comprehensive review of the literature and epidemiological evidence to date, cannabinoids stand to be one of the most interesting, safe, and accessible tools available to attenuate the devastation resulting from the misuse and abuse of opioid narcotics. Considering the urgency of the opioid epidemic and the broadening of cannabinoid accessibility amidst absent prescribing guidelines, the authors recommend the use of this clinical framework in the contexts of both clinical research continuity and patient care.

Biography

Krista Hammaker is a third-year medical student at Northeast Ohio Medical University's M.D. program who has been involved in clinical research since 2008. At age 17 and under the mentorship of Dr. Rebecca Bascom, MD, MPH, she began drafting permanent impairment ratings for patients with occupational lung disease. She assisted with the creation of a tissue repository for research. Under the mentorship of Dr. David Campbell, MD, she completed a cohort study of medical versus surgical management of massive pulmonary embolism (PE), which led to a revision of Penn State Milton S. Hershey Medical Center's PE treatment protocol. She presented at the American Association of Ophthalmic Oncologists & Pathologists (AAOOP) conference at age 21. Before starting medical school, she studied naturopathic medicine at Bastyr University, where she learned about herbal medicine and supplement research, sourcing, and manufacturing. While studying naturopathic medicine, she worked with Dr. Laurie Mischley, ND, Ph.D. on a qualitative study of the effectiveness of cannabis in the palliation of Parkinson's disease, with Dr. Leanna Standish, ND, Ph.D., on a retrospective matched con- trol review of breast cancer survival in women treated with integrative medicine. With Dr. Standish, KH helped achieve the first FDA approval for human research with ayahuasca—a Phase 1 safety and dose-finding study of ayahuasca tea in healthy adults (IND 131217). She has earned a Certificate in Clinical Research from the University of Pittsburgh School of Medicine, and other notable research efforts include a study of long-term outcomes of neoadjuvant chemoradiation and esophagectomy, as well as employed research positions funded by the Patient-Centered Outcomes Research Institute (PCORI) and Sleep and Behavioral Neuroscience Center at the University of Pittsburgh.

Art Therapy in Addiction Treatment as A Means of Facilitating the Therapeutic Process and Enhancing the Patient's Well-Being

Katerina Zachova*, Jaroslav Vacek, Kamil Kalina

Charles University, First Faculty of Medicine, Department of Addictology, USA

Visual Art Therapy (ArT) belongs to creative expressive therapies. It is a traditional field with a well-developed network of educational and research institutions and evidence-based practice. ArT is applied in all types of addiction treatment for all target groups. It is a desirable complement to the prevailing CBT approaches. Art facilitates establishing a therapeutic relationship, overcoming resistance, expressing emotions and non-verbalizable feelings, providing a safe space to work with complex topics, and reducing the risk of re-traumatization. It contributes to the release of tension and strengthens self-confidence. It offers new stimuli for self-development and well-being in after-treatment life. Compared to verbal therapy, it has tangible artifacts with which we can continue to work and follow the development of the therapy. Czech Art has specificities determined by the socio-political context in which it has developed. One of its benefits is the psychodynamic method of Projective Interpretive Art (PIArT) used with addiction therapy. While it places higher demands on patients, it allows for deeper introspection and more explicit insight into one's situation and relational connections. It brings benefits to both patients and therapeutic teams.

This paper presents the possibilities of Art and PIArT in addiction treatment. The presentation draws on the literature and a questionnaire and field survey conducted in 2020 and 2024 in long-term and medium-term inpatient addiction care facilities in the Czech Republic. The field survey was conducted in 18 facilities with 30 art therapists, and the data was processed using qualitative methods.

Biography

Kateřina Zachová is an art therapist and drama therapist. She works at the Clinic of Addictology at the First Faculty of Medicine of The Charles University in Prague (FFM UK), the General University Hospital in Prague, and the Therapeutic Community for addiction treatment Magdalena. Her professional training is based on fine arts and therapeutic training. Since 2020, she has specialized mostly in addiction treatment. She is a Ph.D. student at the Department of Addictology of FFM UK. Her dissertation focuses on implementing the art therapy component in addiction care in the Czech Republic.In 2012, I started my current work as an assistant researcher for the City of Scientific Research and Technological Applications (SRTA), the Advanced Technology and New Materials Research Institute (ATNMRI), and the Fabrication Technology Research Department. I got my master's degree in the preparation of a bone scaffolding material from "carbon nanofiber/hydroxyapatite nanocomposite" that can be used for bone regeneration. After that, I had a project from the Egyptian Science and Technology Development Fund and acted as the principal investigator (PI). This project allows me to get training at a cell culture lab to perform cytotoxicity, cell counting, cell viability, and cell morphology experiments at the Department of Functional Materials of Medicine and Dentistry, Wurzburg University, Germany.

After That, I earned my Ph.D degree in the topic of "Developing Injectable Bioactive Borate Glass / Polymeric Nanofiber / Hydrogel Composites for Bone Regeneration''. We prepared the hydrogel composites and studied them in vitro on the cells (biochemically, ELISA, and gene expression) for different time intervals. I have experience as a research member on different research projects, and now I am working on the running one on the formulation of nanofibrous membranes and cylindrical hydrogels for the enhancement of osteogenic properties.

I work on the synthesis of different materials for different applications. Bio-scaffold for bone regeneration, biosensors, drug delivery systems, and water desalination membranes.

Negative Emotions Activate Game-Related Semantic Concepts in Individuals with Gaming Disorder: An fMRI Study

Xuemei Gao*, Yuhong Zhou

Southwest Jiaotong University, Chengdu, China

Negative Emotions Activate Game-Related Semantic Concepts in Individuals with Gaming Disorder: An fMRI Study: Existing literature suggests a significant comorbidity between gaming disorder and negative emotions such as depression and anxiety. It remains to be empirically established whether this association indicates the development of a pathological associative learning pattern among individuals with GD, characterized by a propensity to cope with negative emotions through excessive gaming behaviors. To address this issue, the present study utilized the priming Stroop color-naming task following exposure to positive and negative affect primes to compare the neural responses of individuals with GD and recreational game users (RGU) to gaming-related and non-gaming-related words. The results showed that under the contrast condition between gaming and no-gaming target word where the negative priming preceded, individuals with GD displayed a significant attenuation in the functional connectivity between the right caudate and the right putamen, as well as between the right caudate and the right insula, in comparison to RGU. Moreover, the connectivity between the right caudate and the right insula was found to mediate the relationship between group affiliation (GD vs. RGU) and attentional bias toward gaming stimuli under negative priming conditions. These results suggested that negative emotions could precipitate a dysregulation within the goal-directed and habitual systems of individuals with GD, potentially leading to an attentional bias toward gaming under negative emotional states. This neural evidence supports the hypothesis that individuals with GD may have developed a habitual reliance on gaming as a coping mechanism for negative emotions.

Biography

Xuemei Gao has completed her PhD at the age of 48 years from Southwest University and as a visiting scholar at Waseda University in Japan. She is the director of the Psychological Research and Counseling Center of Southwest Jiaotong University. She has published more than 60 papers in reputed journals.

Assessing the Knowledge of Oral Nicotine Pouches Among Medical Students in Bangladesh

Oishi Barua1,2*, Fariha Tasneem2, Samia Amin3

1Children's National Hospital, United States
2Chattogram Maa-O-Shishu Hospital Medical College, Bangladesh
3Macquarie University, Australia

Background: The emergence of oral nicotine pouches (ONPs) as alternatives to traditional tobacco products has introduced a novel method of nicotine delivery. Knowledge about ONP is crucial for medical students, as they are the future healthcare providers responsible for guiding patients toward healthier choices. Additionally, awareness of ONPs allows medical students to engage in preventive healthcare measures and provide accurate information to patients, ultimately contributing to improved.

public health outcomes.

Objective: This study investigated the awareness and understanding of ONPs among first-year medical students in Bangladesh.

Method: A cross-sectional study was conducted with 49 Bangladeshi first year medical students in Chittagong, during the period of April to May 2024. We collected demographic information and assessed knowledge about ONPs using a Google Form survey consisting of 10 questions. A Likert scale incorporating choices such as "True", "False" and "Don't know" was used for data collection. Precautions for duplication were maintained by verifying email addresses and restricting respondents to one response each.

Result: Key findings include higher proportion of females (53.1%); majority (95.9%) respondents were within the 20-24 age range. While 42.9% had heard of ONPs, 57.1% were unaware. Additionally, 91.8% never read about ONPs in scientific journals and 69.4% had previously seen advertisements of ONPS in social media. The highest 'TRUE' response (65.3%) was to the statement describing the nature of ONPs, while the highest 'FALSE' response (36.7%) related to health risks compared to traditional tobacco products. The statement about combustibility garnered the highest 'DON'T KNOW' response (51.1%), indicating uncertainty.

Discussion: Our study compares findings on Saudi medical students' knowledge of ONPs with a prior study on e-cigarettes. While demographic characteristics likely align, awareness levels (42.9% for ONPs) may differ. Factors affecting awareness, like advertisements and education, may vary due to cultural and regulatory disparities. Comparative analysis could illuminate cross-cultural knowledge discrepancies. Health education initiatives are crucial to raising awareness about ONPs among medical students and the public. Regulatory measures are essential to protect vulnerable populations and to ensure the spread of accurate information while limiting youth-targeted advertising and health risks. Future research should explore the long-term health effects of ONP use, including potential addiction and oral health implications.

Biography

I am an International Medical Graduate and a licensed medical practitioner from Bangladesh. I am currently pursuing the United States Medical Licensing EXAM with the goal of becoming a doctor here in the United Sates. I recently passed my Step1 and Step2-ck, and I will be applying for the upcoming 2025 match cycle in Internal Medicine. Additionally, I have been working as a research trainee at the Children's National Hospital in Washington, DC United States.After That, I earned my Ph.D degree in the topic of "Developing Injectable Bioactive Borate Glass / Polymeric Nanofiber / Hydrogel Composites for Bone Regeneration''. We prepared the hydrogel composites and studied them in vitro on the cells (biochemically, ELISA, and gene expression) for different time intervals. I have experience as a research member on different research projects, and now I am working on the running one on the formulation of nanofibrous membranes and cylindrical hydrogels for the enhancement of osteogenic properties.

I work on the synthesis of different materials for different applications. Bio-scaffold for bone regeneration, biosensors, drug delivery systems, and water desalination membranes.

Opioid Overdose Harm Minimisation – Patient's Perspective

Shakeel Ahmed Jameel Ahmed*, Anolue Onyinye, Vyasa Immadisetty.

Substance Misuse Service, Essex Partnership NHS University Foundation Trust, Colchester, United Kingdom

Introduction: Opioid overdose has been one of the major reasons for drug related deaths. Worldwide, about 600 000 deaths were attributable to drug use in 2019 (1). Close to 80% of these deaths are related to opioids, with about 25% of those deaths caused by opioid overdose (1). Opioid overdoses that do not lead to death are several times more common than fatal overdoses. Opioid-related deaths make up the largest proportion of drug-related deaths across the UK, with an average of 40 deaths a week. In 2022, opioids were involved in: 73%, 60%, 82%, 60% of drug misuse deaths registered in England, Wales, Scotland and Northern Ireland respectively (2). Undoubtedly there has been a spike in the number of fatal and non-fatal opioid overdoses with the increased circulation of heroin mixed with contaminants like synthetic opioids (Fentanyl, Car fentanyl) which are 50-100 times more potent than Heroin (1). Hence, there was a need to increase the awareness about prevention of opioid related overdose especially based on their attitude and perception about harm minimization for opioid overdose.

AIM: To understand the substance misuse service user's attitude towards Opioid overdose harm minimization.

Methodology: A brief qualitative survey was given to the client's attending Substance misuse service in Essex. 19 clients consented to take part in this survey where they answered 2 open ended questions, which were -

1.If you have one piece of advice to give to a friend on how to prevent opioid overdose, what would that be?

2.What are your 'survival techniques' to prevent opioid overdose?

The responses were collated, pooled and thematically analyzed.

Results and Discussion: The responses elicited from the study participants were broadly categorized into 2 themes surrounding the preventive and intervention aspects of harm minimization. The following responses were elicited from the service users who participated in the study.

Responses suggesting Prevention	Responses suggesting Intervention

"Know your Limit." "Do not do it!" "Smoke rather than inject." "Moderation is key" "Make sure you have naloxone and be trained on using it. It takes 5mins". "Would advise not to smoke stuff due to cutting." "Do a little bit of what you have first to test tolerance." "Use the same dealers." "Keep stashes separate to avoid fiending" (Using more and more because it is there) "Shake the bag-If you see something different, be careful." "Stick with familiar products"	"Know what to do if someone overdoses"? "Be aware of the signs of overdose." "Recovery position" "Naloxone jab" "Call ambulance" "Talk to someone, reach out to support network." "Don't lock the door or block it!"

Most of the responses obtained were relevant to the problem of opioid related overdose and was in keeping with the professional advice given to Substance misuse service users (3,4). The responses obtained in the survey were included in the information leaflet and quoted verbatim so that the clients can identify with the information. Few responses like "Shake the bag-If you see something different, be careful" and "Keep stashes separate to avoid fiending" (Using more and more because it is there) are not the usual advice offered for harm minimization, suggesting new learning that needs to be explored further. The above information was supplemented with further professional advice like how to identify signs of opioid overdose as well as the numbers to contact the emergency services and an information leaflet was created for improving awareness.

Conclusion: Having insight into the substance misuse clients understanding of the drug use problem helps to narrow the knowledge gap between drug users and health professionals. Creating information leaflets based on the service users input and quoting them verbatim is likely to make it more relevant as well as acceptable to them. There is a need to replicate this survey in geographically different settings in the country to study the generalizability of the responses obtained as well as to look for new learning avenues.

Biography

Dr Shakeel Ahmed Jameel Ahmed is working as a specialty doctor in Substance misuse service and in Mental health rehabilitation input unit. He has been trained in India and is pursuing to take up higher training in Psychiatry in the UK. He has a special interest in audit and research, especially in addiction psychiatry.

Cannabinol (CBN) as a Novel Therapeutic Tool in Geriatric Brain Health: Implications for Addiction Management

Luiza Spiru1,2*, Mircea Dan Marzan1, Vlad Petru Nutu 1

1Ana Aslan International Foundation – the Excellence Centre for Neurocognitive Diseases, Brain Health and Longevity Clinical Science
2Carol Davila University of Medicine and Pharmacy – Geriatrics, Gerontology , Old Age Psychiatry and Longevity Medicine

The aging population is increasingly susceptible to neurodegenerative disorders and substance use disorders, necessitating innovative approaches to treatment. Cannabinol (CBN), a cannabinoid derived from the Cannabis sativa plant, has emerged as a promising candidate for addressing cognitive decline and addiction-related issues in geriatric patients. This presentation aims to explore the potential of CBN in enhancing brain health among older adults, particularly its neuroprotective properties and ability to modulate addictive behaviors. Recent studies suggest that CBN may promote neurogenesis, reduce inflammation, and alleviate anxiety—factors that are critical in both cognitive decline and addiction pathways. Furthermore, CBN's interaction with the endocannabinoid system offers a unique mechanism for mitigating withdrawal symptoms and cravings associated with substance use disorders. By integrating CBN into geriatric care protocols, we can potentially improve outcomes for elderly patients struggling with addiction while simultaneously supporting cognitive health. This presentation will review current literature on CBN's pharmacological effects, discuss clinical implications for geriatric psychiatry, and propose future research directions aimed at establishing CBN as a mainstream therapeutic option in addiction treatment within the aging population.

Biography

Professor of Geriatrics, Gerontology, and Old Age Psychiatry at "Carol Davila" University of Medicine and Pharmacy Bucharest since 2013, and Chair of the Department since 2004. Head of the Clinical Department of Geriatrics since 2003. Visiting Professor at Geneva College of Longevity Science and Geneva School of Business Administration. World EWA Ambassador, President of "Ana ASLAN International" Foundation, and Executive President of Ana Aslan International Academy of Aging. National Representative for EADC and EPMA, and Project Director for more than 44 EU projects. Coordinator of the Excellence Memory Center and Brain Health initiatives.

Pure Sensory Guillain Barre Syndrome Associated with Campylobacter Infection A Case Report

Shyam Bhagat, MD1,4*, Thomas Annesi, MD1,2, Emma Rodney1,3, MD

1Donald and Barbara Zucker School of Medicine at Hofstra/Northwell
2North Shore University Hospital
3Columbia University Irvine Medical Center
4Boston University Medical Campus

Objective: To bring awareness to Pure-Sensory Guillain-Barre Syndrome (GBS), a rare variant of GBS with fewer than 50 cases reported in literature.

Methods: Our patient was seen by the authors in the hospital. History, neurologic exam, and laboratory testing were used to systematically work up a thorough differential.

Results: We report a 42-year-old woman who presented to the hospital with gait instability. Two weeks prior, she experienced diarrhea. Two days before presentation, she began to feel diffuse body aches, difficulty walking, and numbness in her hands and feet. One day later, she experienced issues with hand coordination. On admission, the neurologic exam was significant for a positive Romberg sign and areflexia in the patellar and Achilles reflexes bilaterally. A gastrointestinal PCR pathogen panel was positive for Campylobacter. The patient had normal levels of vitamin B1, B9 and B12. MRI of the full spine was unremarkable. Lumbar puncture was positive for GQ1b antibodies. The patient was treated with IVIG over five days and fully recovered within eight weeks.

Discussion: We present a case of GBS that affected only sensory modalities in an ascending pattern. This represents a rare and potentially underreported variant of GBS:, pure-sensory GBS. Previous studies have shown the presence of GQ1b antibodies in patients with recent C. jejuni infection and sensory deficits with sparing of motor nerves. It is unclear how the presence of GQ1b antibodies relates to the pure-sensory presentation. Currently, there is a gap in the literature on the relationship between GQ1b antibodies and pure-sensory GBS. Other GQ1b associated forms of GBS (Miller-Fisher Syndrome, pharyngeal-cervical-brachial GBS, and Bickerstaff brainstem encephalitis) exist. However, these are not motor sparing. Additionally, GQ1b antibodies have not been present in all cases of pure-sensory GBS. We believe that pure-sensory GBS should be considered in patients with ascending sensory deficits.

Biography

I am a first year neurology resident at the Boston Medical Center program with growing interests in both neuro-immunology and neuro critical care topics. My research to date generally depicts variants of AIDP that pose diagnostic challenges.

Johanna Salazar Nassar

Hospital Calderon Guardia, Costa Rica

Vibrotactile Coordinated Reset Fingertip Stimulation for the Treatment of Parkinson's Disease

Peter A. Tass*

Department of Neurosurgery, Stanford University School of Medicine, USA

Abnormally strong neuronal synchronization is a hallmark of Parkinson's disease (PD). In medically refractory PD patients, standard deep brain stimulation (DBS) reduces specific symptoms during stimulus delivery. Coordinated Reset (CR)-DBS is a computationally developed technique that uses dedicated patterns of electrical stimuli to counteract abnormal neuronal synchronization by desynchronization. The goal of CR stimulation is to make neuronal populations unlearn abnormal synaptic connectivity patterns, inducing long-lasting relief. Long-lasting therapeutic and desynchronizing CR-DBS effects have been demonstrated in Parkinsonian (MPTP) monkeys and externalized PD patients.

To provide a non-invasive alternative to DBS, we developed vibrotactile Coordinated Reset (vCR) fingertip stimulation. Instead of administering electrical bursts through depth electrodes, we non-invasively deliver weak vibratory bursts in a CR mode to patients' fingertips. In a first-in-human study, vCR fingertip stimulation was administered to 5 idiopathic PD patients for a total of 4 hours per day over 3 consecutive days. Off-medication kinematic assessments revealed improved gait and bradykinesia during stimulation days and one month after cessation of stimulation.

In a pilot study, six idiopathic PD patients were treated with vCR stimulation delivered for a total of 4 hours per day for 3 months. Patients' conditions were evaluated after medication withdrawal (off medication) using MDS-UPDRS III scores and EEG recordings before and after 3 months of vCR. vCR therapy caused a statistically and clinically significant reduction of PD symptoms off medication along with a significant reduction of high beta (21-30 Hz) power in the sensorimotor cortex. Additionally, in a case series of 3 idiopathic PD patients, 6+ months of vCR therapy caused significant motor improvement, with off-medication MDS-UPDRS III scores decreasing linearly. The ultimate goal of vCR is to induce sustained symptom relief by non-invasively delivering weak vibratory stimulation patterns regularly or occasionally.

Biography

Peter A. Tass studied medicine (MD, Ulm and Heidelberg University, Germany), physics (PhD, Stuttgart University, Germany), and mathematics (diploma, Stuttgart University). He completed a Habilitation in Physiology at RWTH Aachen University, Germany. Since 2017, he has been a Professor of Neurosurgery in the Department of Neurosurgery at Stanford University Medical School, Stanford, CA, USA. Peter A. Tass investigates and develops neuromodulation techniques for understanding and treating neurological conditions such as Parkinson's disease, epilepsy, dysfunction following stroke, and tinnitus. He creates invasive and non-invasive therapeutic procedures through comprehensive computational neuroscience studies and advanced data analysis techniques. Peter A. Tass has published more than 170 peer-reviewed papers, is the inventor or co-inventor of more than 270 patents and has received numerous national and international awards.

Light Exercise Intensity and Minimal Supervision Improve Cognitive Function in Amphetamine Patients

Vimolmas Tansathitaya1*, Tanapati Phakham2, Witchana Sarasin2, Kotchaporn Phuakpong3, Charunrak eepoo3, Areekul Amornsriwatanakul1, Ampika Nanbancha1, Sunchai Payungporn4

1College of Sports Science and Technology, Mahidol University, Thailand
2Center of Excellence in Systems Biology, Faculty of Medicine, Chulalongkorn University, Thailand
3Princess Mother National Institute on Drug Abuse Treatment, Thailand

Background The use of amphetamine- substances or ecstasy is widespread among young people across Southeast Asia, and particularly in Thailand. When used over long periods of time, amphetamines can induce cravings, depression, aggressive behavior or mental health problems. Forty -male patients engaged in two different 40 mins exercise groups (1) light- exercise with less supervision (2) circuit training with close supervision. The participant's blood was withdrawn for protein BDNF analysis, and MMSE was given on day 1 and day 31. The results showed the cognitive function improved in light aerobic exercise.

Biography

At Mahidol University's College of Sports Science and Technology in Thailand, I leverage my research expertise in miRNA, fitness, and chronic illnesses to educate students as a lecturer. My interests extend to the microbiome's role in exercise and chronic diseases, as explored in a 2022 publication. A key research area for me involves the transgenerational impact of diseases on birth abnormalities, using miRNAs and target genes as biomarkers. My current research, funded by Tinarathpatra Co Ltd., Thai Health Promotion Foundation, and Mahidol University, investigates BDNF gene expression in amphetamine users. This project encompasses BDNF, single nucleotide polymorphisms (SNPs), mRNAs, miRNAs, and the microbiota to explore potential interventions for miRNA and target gene expression. Inspired by my Ph.D. in Health Promotion and Human Services from the University of Cincinnati, I began exploring the interplay between genotype, lifestyle changes, and exercise in disease prevention. This initial focus on genotypes has evolved into in-depth epigenetic studies, particularly the role of miRNAs and target genes as key indicators.

Neural Nanomedicine: Fighting Stroke, Improving Stem Cell Delivery, Healing Nerves and Using Artificial Intelligence

Thomas J. Webster *

Hebei University of Technology, China

Nanomedicine leverages nanomaterials to enhance disease prevention, detection, and treatment, resulting in hundreds of FDA-approved medical products. Despite its long-standing presence, recent technological advancements have expanded its potential. One such advancement is the integration of Artificial Intelligence (AI), which has transformed various industries, though its application in nanomedicine remains limited. This presentation focuses on the significant impact AI has made in the field through the development of implantable sensors. These sensors, equipped with AI, can analyze patient responses to implants, predict future outcomes, and communicate with handheld devices to mitigate AI-predicted adverse events. This talk will provide examples of AI-enhanced implantable sensors used in orthopedics to prevent infections and promote bone growth, supported by both in vitro and in vivo experiments. Additionally, the presentation will highlight how AI can be harnessed to advance nanomedicine, particularly in the realm of implantable sensors. The talk will conclude by summarizing recent developments in nanomedicine aimed at improving human health and environmental sustainability.

Biography

Thomas J. Webster holds degrees in chemical engineering (B.S., University of Pittsburgh, 1995) and biomedical engineering (Ph.D., RPI, 2000). His academic career includes professorships at Purdue University (2000-2005), Brown University (2005-2012), and Northeastern University (2012-2021), where he also served as Chemical Engineering Department Chair (2012-2019). He has founded over a dozen companies, producing numerous FDA-approved medical products that benefit over 20,000 patients. His technologies are also applied in commercial products for sustainability and renewable energy. Currently, Dr. Webster supports these companies and serves as a professor at Brown University, Saveetha University, Vellore Institute of Technology, and UFPI, among others. Recognized with numerous awards, he was named a World Top 2% Scientist by Citations (PLOS, 2020), SCOPUS Highly Cited Researcher (Top 1% Materials Science and Mixed Fields, 2020), Clarivate Top 0.1% Most Influential Researchers (Pharmacology and Toxicology, 2021), and Best Materials Science Scientist by Citations (Research.com, 2022). A fellow of over eight societies, he is a former President of the U.S. Society for Biomaterials and has over 1,350 publications with more than 55,000 citations. Recently nominated for the Nobel Prize in Chemistry, Prof. Webster has also established a fund to support Nigerian student research in the U.S.

DAY 3

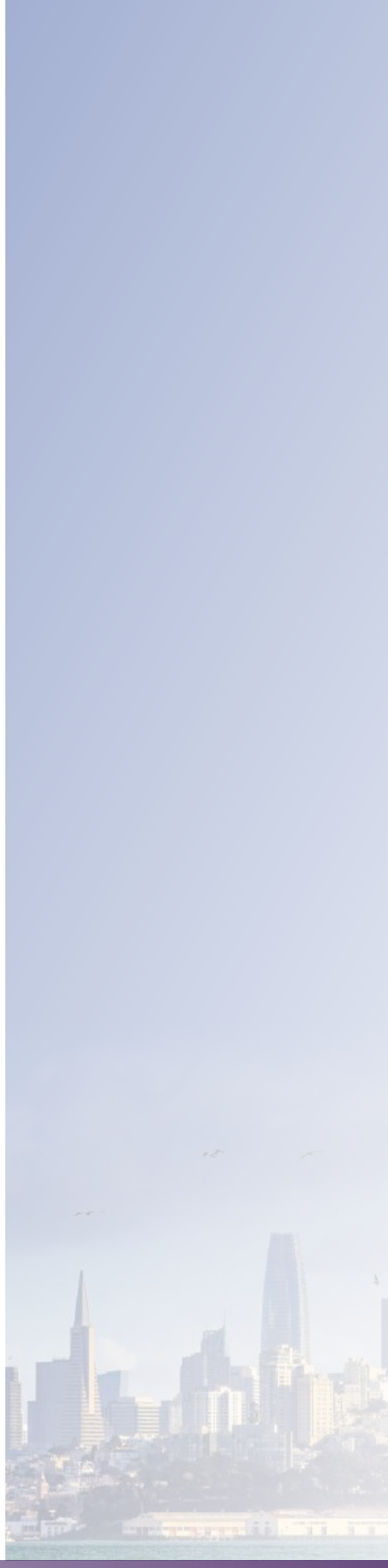
Joint Event

Neurology, Addiction and **Dementia**

World Conference

September 4-6, 2024

California, USA



VIRTUAL KEYNOTE PRESENTATIONS

Brain Connectivity in Multi-Level Language Systems Before and After Specialized Instruction for Dysgraphia, Dyslexia, and OWL LD

Virginia Wise Berninger1*, Todd Richards1, Robert Abbott1, and Steve Tanimoto1

1University of Washington,USA

First, an overview of brain evidence for four language systems (by ear, by mouth, by eye, and by hand) and multi-leveled language systems (subwordàwordàsyntaxàtext) will be presented. Second, behavioral evidence for defining and diagnosing three specific learning disabilities—Dysgraphia, Dyslexia, and OWL LD—based on language systems and levels of language will be described. Third, earlier brain imaging paradigms based on specific locations in the brain will be illustrated for comparing typically developing literacy learners and children or youth with Dyslexia or Dysgraphia both before and after those with Dyslexia or Dysgraphia have instructional intervention. Finally, a newer brain imaging paradigm that compares brain connectivity among brain locations will be illustrated with research on levels of language in the reading brain or writing brain and on the brain's response to reading or writing instruction. The results of the brain connectivity studies will be discussed for their scientific significance and their translation into practice.

Biography

Following 9 years of teaching in inner city, suburban, and rural public schools (5 years general education and 4 years special education), Virginia Wise Berninger completed a Ph.D. in Psychology at Johns Hopkins University in 1981 (specialization in developmental psycholinguistics, cognitive psychology, social psychology, psychobiology, and quantitative psychology) and predoctoral and postdoctoral training in clinical psychology at Boston Children's Hospital from 1980-1982. Dr. Berninger was on the faculty of Harvard Medical School (Psychiatry) from 1981-1983, the faculty of Tufts New England Medical School (Physiatry) from 1983-1986, and the faculty of the University of Washington from 1983 to 2016 (Educational Psychology and Learning Sciences and Human Development). At the University of Washington, the courses she taught included topics in neuropsychology and educational neuroscience; and she was the Principal Investigator of multiple NIH grants from the National Institute of Child Health and Human Development for 22 years; these included grants on writing disabilities, a multidisciplinary research center on learning disabilities (brain imaging, genetics, diagnostics, and intervention), and a longitudinal study of typical reading and writing development. She was also a co-principal investigator of a grant on math from the US Department of Education and a grant on dyslexia from the United States-Israel Binational Science Foundation. In addition, she has been an investigator on grants from NIH on the genetics of dyslexia. As a Professor Emerita at the University of Washington, she has remained professionally active in helping former Ph.D. students and colleagues publish 29 articles (+ 1 waiting for final acceptance) based on data collected on the grants; 12 of these are on the brain and will be featured in her presentation at the World Neurology Conference. She has also authored or co-authored 8 invited book chapters, revised User Guides for two research-based tests, revised five books on translating research, including brain research, into psychological and educational practice, and continued to present virtually at conferences and in webinars.

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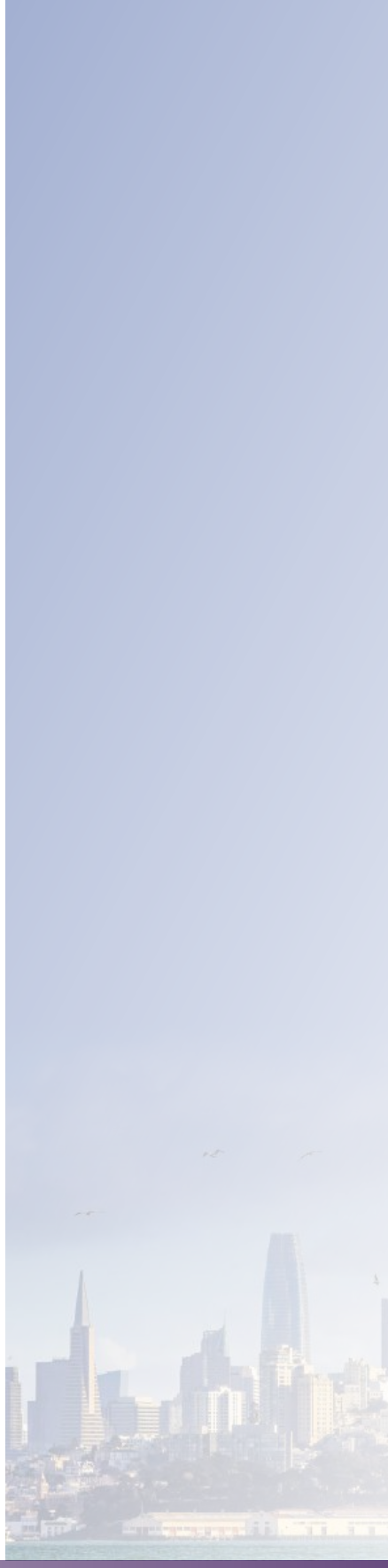

VIRTUAL ORAL PRESENTATIONS

Effect of Noradrenaline in the Ventrolateral Preoptic Area

Roberto De Luca1*, Jinhwan Choi1, Christopher A. Cano1, Francesca Raffin1, Stefano Nardone2, Enrico Rillosi1, Bridget Fitzgerald1, Andrea Pigozzi1, Oleksandra Fanari1, Lin Zhu1, Christian R. Burgess3, Thomas E. Scammell1 and Elda Arrigoni1

1Department of Neurology, Division of Sleep Medicine, Beth Israel Deaconess Medical Center and Harvard Medical School, Boston, USA
2Department of Medicine, Division of Endocrinology, Diabetes and Metabolism. Beth Israel Deaconess Medical Center and Harvard Medical School, Boston, MA, USA
3Department of Molecular and Integrative Physiology and Michigan Neuroscience Institute, University of Michigan, Ann Arbor, MI, United States

Neurons within the ventrolateral preoptic area (VLPO) play a crucial role in the initiation and maintenance of sleep. The activity of VLPO galanin (VLPOGal) neurons, key regulators of sleep, is modulated by noradrenaline (NA) from the locus coeruleus (LC) during wakefulness. Using in vivo and in vitro recordings, we investigated how NA regulates VLPOGal neurons. Our findings show that NA levels in VLPO are elevated during wakefulness compared to non-rapid eye movement (NREM) and rapid eye movement (REM) sleep phases. NA inhibits VLPOGal neurons via post-synaptic alpha-2 adrenergic receptors and enhances GABAergic input, suggesting a dual mechanism of action.

Furthermore, optogenetic stimulation revealed a local inhibitory circuit involving VLPO GABAergic neurons that modulate VLPOGal neuron activity, with NA enhancing this inhibition through alpha-1 receptors. Orexin-mediated activation of LC terminals also facilitates NA release, contributing to VLPOGal neuron inhibition during wakefulness. Importantly, mice lacking orexin neurons exhibit reduced NA release in VLPO, potentially linking orexin deficiency to the pathophysiology of narcolepsy.

This study provides insights into the intricate regulatory mechanisms by which NA influences VLPOGal neuron activity, offering implications for understanding sleep-wake transitions and disorders such as narcolepsy.

Biography

Roberto De Luca, PhD, is an Instructor at Harvard Medical School affiliated with the Department of Neurology at Beth Israel Deaconess Medical Center. His research focuses on unraveling the neural circuits and mechanisms controlling wake-sleep states in the brain. Dr. De Luca's work aims to bridge the gap between neurochemical circuit activity and physiological sleep behaviors in animal models, shedding light on fundamental aspects of sleep regulation.

He is a first-generation Haitian American who pursues faith, civic engagement, and advocacy for the profession of occupational therapy.

Immediate Healing for Leadership Personality Development from distance

Mohamed Hadi Eltonsi*

Former Ambassador and Free Lance Medical Doctor, Cairo University Medical College, Egypt

Statement of the problem: clients receiving psychotherapy require several sessions, even if with drugs and the use of willpower over time. Purpose of the treatment: Achieving from distance immediate nonmedicinal effortless, painless healing without complications for leadership personality development, relief of neurotic disease, psychosomatic symptoms and diseases, treating emotional obesity and smoking.

Method: After joint analysis with the Client and a definition of psychological and physical goals of treatment, the healer as a trained behavioural, cognitive, and logo psychotherapist, arrives with client to a new corrected understanding of the case, roots of conflicts in childhood, and goals taking around 3 hours by video call application then reiki technique during his/ her sleeping hours wherever he/she is 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 unconscious mind embodying the required state. The unconscious and conscious mind will have the same agreed-upon analysis and targets for immediate results in that session of 3 hours in addition to less than 2 hours of sleep.

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 1200 cases aging between 12 and 80 years with relief of 96% of cases either totally or mostly.

Conclusion: immediate non-medicinal revolutionary life transforming healing from distance 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 mature community leaders to be motivating troubleshooters and efficient leaders with team spirit.

Biography

Dr Hadi Eltonsi a medical graduate trained in group psychotherapy, hypnosis, silva mind control, NLP, Reiki Master, PanicHealing, Life Couch, Mantra Yuga meditation among other courses for psychic powers, family constellation thru 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 and got patent and published twice for immediate healing for personality development (in situ) and instant leadership mindset formation from distance.

The Future of Neuroscience Education, From Active Learning to the Metaverse

Stefano Sandrone*

Imperial College London, United Kingdom

What will the future of neuroscience education look like? This talk explores innovative trends shaping the landscape of neuroscience education, from traditional active and distance learning methods to the emerging frontier of the metaverse. Discussions will cover advancements in mixed reality, gamification, and technology-enhanced learning, highlighting their potential to revolutionize medical education. Learning outcomes: Analysing advantages and limitations of active learning approaches Familiarizing with a range of assessment strategies for in-person and distance teaching Recognizing the potential of augmented reality, virtual reality, and the metaverse in medical education

Biography

Stefano Sandrone, PhD, MEd, is an Italian neuroscientist and educationalist based at Imperial College London. He is the recipient of the Science Educator Award from the Society for Neuroscience and has twice been honored with the B. Baker Teacher Recognition Award from the American Academy of Neurology. Dr. Sandrone has authored several influential works in neuroscience education, including books and numerous academic publications. His research interests span active learning methodologies, virtual and augmented reality applications in medical education, and the transformative potential of the metaverse.

Perspective Strategies for Interventions in Parkinsonism: Remedying the Neglected Role of TPPP

Judit Magdolna Ovádi*, Attila Lehotzky, Tibor Szenasi, Judit Olah

Institute of Molecular Life Sciences, HUN-REN Research Centre for Natural Sciences, HungaryResearch Institute, City of Scientific Research and Technological Applications, Egypt

With the aging of society, neurological disorders such as Parkinsonism are causing serious socio-economic problems as there are, at present, only therapies that treat the symptoms. The disordered alpha-synuclein (SYN) and Tubulin polymerization-promoting protein (TPPP), which are expressed in neurons and oligodendrocytes of the normal human brain, respectively, are hallmarks of these diseases. These hallmarks are co-enriched and co-localized in both cell types leading to the development of Parkinson's disease (PD) and multiple system atrophy (MSA). These 'chameleon' proteins display both physiological and pathological functions, thus neither of them is an ideal drug target. Parkinsonism research has been focusing predominantly on the elimination of the pathological assembly of SYN, the fatal species in the development of these diseases. Accordingly, the therapeutic methods suggested so far include depletion of the accumulated SYN by miRNAs or siRNAs or by using PROTAC technology, which can affect the pathological aggregations. Our innovative strategy denoted "interface drug targeting" considers the TPPP-promoted SYN aggregation and identified the segments of both proteins involved in the pathological hetero-association. The flexible core region (147-156 aa) of TPPP s and the C-terminal segment of SYN (126-140 aa) have been identified as potential interacting binding regions, the deletion of which abolishes the hetero-association. In addition, the SYN fragment inhibited the pathological assembly of the two hallmark proteins as visualized in living human cells by immunofluorescence confocal microscopy. Our data have revealed that although targeting chameleon proteins is a challenging task; nevertheless, the validation of a drug target can be achieved by identifying the interface of the complexes of the partner proteins existing at the given pathological conditions. The "interface-targeting strategy" for Parkinsonism does impede the pathological TPPP-induced SYN aggregation; in addition, it ensures the recovery of the physiological functions of both multifunctional proteins. Based on these recent findings, we suggest that the clinical PD/MSA research focuses on the neglected role of TPPP occurring exclusively at pathological conditions to promote the cure of Parkinsonism.

Biography

Prof. Dr Judit Ovadi, professor emerita, her expertise is in biochemistry and neurological disorders. She defined metabolicchanneling as a powerful mechanism to control and direct metabolisms at crossroads. Her research team demonstrated the sensing characteristic of the microtubule pathway at system level. Her research team discovered a unique brain-specific protein denoted Tubulin Polymerization Promoting Protein (TPPP/p25) characterized as Neomorphic Moonlighting Protein. Recently, she proposed an innovative strategy defined as "interface targeting" for therapy of Parkinsonism. She has been the Supervisor of several MS, PhD and DSc dissertations, Visiting Professor in Spain, and USA, Invited speaker at international conferences in EU and oversea. Scientific activities.

Takutsobo of the Brain"? - A Case of Acute Emotional Distress-Induced SAH

A case of Stress-Induced SAH: Exploring Parallels with Takotsubo Cardiomyopathy

Stephanie Arens1*, Daly, Daquan1; Schachter, Dan1
1Department of Neurology, Emory University, Atlanta, GA, USA

Takutsobo cardiomyopathy is a form of transient reversible heart failure caused by neurocardiogenic stunning. In response to the mortality associated with this condition, diagnostic awareness has increased and has also led to its well described association with and sequelae of subarachnoid hemorrhage. While emotional distress is the classic trigger for Takutsobo, it is also a heavily documented trigger for other neurologic conditions such as RCVS and transient global ischemia suggesting its ability to cause acute neuronal and vascular dysfunction through sympathetic overactivity. Interestingly, there have been minimal to no studies and case reports looking at emotional distress and subarachnoid hemorrhage. Though the vast majority of SAH due to hypertensive bleeds and aneurysmal rupture, with a smaller amount due to underlying structural pathology, 10% of SAH are ultimately described as idiopathic after a complete imaging workup.

We present a case of a 73-year-old female with onset of severe headache immediately after witnessing her husband's death, with subsequent dysarthria and left sided weakness. CT head revealed a right frontal ICH with bifrontal SAH extension, with further brain MRI and diagnostic angiogram unrevealing for any other underlying pathology.

Biography

Stephanie Arens is a fourth-year medical student at Emory University School of Medicine, planning to pursue a career in emergency medicine with a special interest in strokes and pediatric readiness in community hospitals. Throughout her time at Emory, she has worked alongside teams serving patients of the Marcus Stroke Center at Grady Memorial Hospital, a level 1 trauma center and one of the 10th largest public hospitals in the US.

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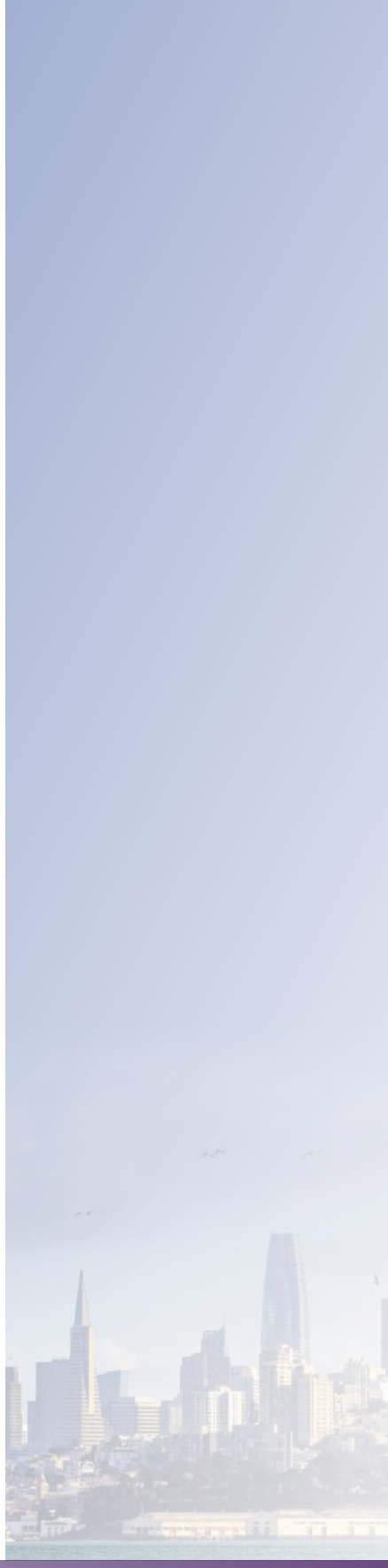


VIRTUAL KEYNOTE PRESENTATIONS

The Subcritical Brain and Motion Control

Yoram Baram*

Computer Science Department, Technion, Israel Institute of Technology, Haifa, Israel

The double-faceted title of this presentation combines, on the one hand, the titles of two separate books published recently by Baram, and, on the other, two seemingly different concepts, which, as will be shown, have a lot in common. An early motivation of Baram by his studies of aeronautical engineering and control theory, and a coincidental TV exposition of a Parkinson's disease patient, have, somewhat unexpectedly, raised Baram's interest in the interaction between brain, neurology and motion control. The underlying mathematics of it all was an intriguing factor, but the consequential personal interaction with neurological patients and doctors was a highly rewarding introduction of Baram to a whole new world. The first step was the creation of a closed-loop apparatus, which provides motion impaired patients with a virtual tiled floor. Having received a formal US patent license for his device, Baram proceeded with the development of smaller and lighter portable devices, including auditory feedback corresponding to the patient's own steps. At the same time, Baram teamed with medical neurologists in both Israel and the US, to perform clinical testing of patients with Parkinson's disease, Multiple sclerosis, Cerebral palsy, Stroke, and idiopathic senile gait. All test results, mostly highly successful, were published in leading medical journals and conferences. In addition, Baram has published highly endowed papers in the scientific literature and like conferences, addressing control theory, neural networks and cortical connectivity and functionality. Having received several honourable mentions and research awards and having been head of the Technion Centre for Artificial Intelligence until his retirement in 2015, Baram is still an active researcher at the Technion.

Biography

Professor Yoram Baram of the Computer Science Department at the Technion, Israel

Institute of Technology has graduated in aeronautical engineering at the Technion in1972. Moving to the US, he received the MSc degree in aeronautics and astronautics, and the PhD degree in electrical engineering and computer science at the Massachusetts Institute of Technology (MIT) in 1974 and 1976, respectively. Having worked on airborne and marine control and navigation systems at the Analytic Sciences Corporation in Reading Massachusetts, he returned to Israel in 1978, Baram has found considerable interest in the newly emerging field of neural networks, and,

subsequently, taught the first courses in neural networks at the Technion.

In 1998, watching a Parkinson's patient on American television, Baram felt driven to develop a portable, closed-loop visual and auditory apparatus for helping people with movement disorders, for which he received a US patent in 2004 (US patent No.6,734,834-B-1, "Closed-loop Augmented Reality Apparatus"). Joining forces with leading neurological doctors in Israel and in the US, Baram spent the following years developing and testing his device in medical clinics on patients with Parkinson's Disease, Multiple Sclerosis, Idiopathic Senile Gait, patients after Stroke and children with Cerebral Palsy, showing considerable movement improvement in most cases. He has written and published numerous articles in leading medical journals, and in two recent books by World Scientific, "The Subcritical Brain" and "Motion Control". He has received published honorary notifications by colleagues and by leading conferences. At the same time, he has investigated numerous observations on cortical operation from a mathematical perspective, published in leading scientific journals.

Whether is Living Longer a Benefit?

Osman Kucuk*, Emina Kucuk, Alija Kucuk

President of the Organizating Comittee of iCoDem

Introduction: The current societies in SE Europe are rapidly aging. According to official statistics, the average age of the population is over 43 years. Due to migration, the total population lacks people in the 25-44 age group as well as craftsmen. The average life expectancy has increased to over 78 years. At the same time, the gap between the period of healthy life and the average length of life has increased.

Goal: Identification challenges of people with dementia in SE Europe in the context of meeting their needs for health and social protection and putting in connection with challenges of care providers.

Method: Analyze of data presented by the renowned experts of the Central and SE Europe on the Business Forum "Innovations in the health and care sectors tailor bridges between Central and SE Europe" in the context of integrated care, palliative and long-term care regarding with dementia in decade of healthy aging

Results: Datas shows that societies of the SE Europe are not ready faced with situation they are.

Conclusion: We can conclude that the most national systems in the SE Europe do not recognize the principle of integrated care, do not have a defined system of the long-term care or have a significant challenges in implementation, and palliative care connect with oncological patients. Solutions are not simple and have to include many factors that are not only in dependence on the local policymakers and governments but also on entrepreneurial initiatives.

Keywords: dementia, innovations in care area, integrated care, palliative care, long-term care, alzheimerbih, demencijaubih

Biography

Expert for dementia on the field of neuropsychology with own non-pharmacological approach in dementia care. Author of many brochures and two books on dementia for GPs and nurses, as well as guidelines „Dementia in the time of Covid-19 pandemic "(2020.) Coauthor of the transnational guidelines to dementia „Interprofessional Management of Dementia "used for INDEED Online Education Platform funded by EU INTERREG and translated into 5 languages. President of the Organizing Committee of iCoDem – International Congress of Dementia, the most important Congress of dementia in the region of the Western Balkan, member of a programs and scientific committees and active participant of regional and international scientific meetings regarding dementia. Organizer of the two high level meetings (2018., 2020.) regarding: dementia, national dementia strategies and regional cooperation on the dementia field..

Standards of Quality Education in Prevention

Helena Horálek*, Miovský Michal, Gabrhelík Roman

Department of Addictology, 1st Faculty of Medicine, Charles University,

Czech Republic

At the global level, The Universal Prevention Curriculum (UPC) was developed by Prof. Zili Sloboda with a team of highly qualified prevention scientists and experts, Applied Prevention Science International (APSI). The UPC links basic prevention information with a focus on evidence-based programs. It was created through a long process of professionalizing and developing evidence-based prevention education materials. This curriculum is also supported by The International Consortium of Universities for Drug Demand Reduction (ICUDDR). Another international institution that supports the dissemination of the UPC and its sub-outcomes is The International Society of Substance Use Prevention and Treatment Professionals (ISSUP).

The Department of Addictology, 1st Faculty of Medicine, Charles University and General University Hospital, under the leadership of Prof. Miovsky, developed and implemented comprehensive bachelor's, master's, and doctorate-level curricula of Addiction Studies (Addictology) between 2003 and 2012. This Prague model combines three evidence-based approaches to addressing substance use - prevention, treatment, and public health - into a balanced professionalized discipline. In 2016, Prof. Miovsky decided to integrate the Universal Prevention Curriculum (UPC) into these programs of study.

Next, based on the European adaptation of the UPC, Prof. Gabrhelík developed an online course, INEP - Introduction to Evidence-Based Prevention (INEP). Its scope, content and form build on the already developed Four-Level Educational Module in the field of prevention. The INEP course is already available in several languages and has its superstructures. Prevention education is a priority worldwide, including in the Czech Republic.

The emphasis is on the education itself, the content of the curricula (evidence-based prevention, research studies, validation of effectiveness) and their quality and effective delivery. In this paper, we would like to give you an overview of the context of Czech and global developments.

Biography

Helena Horalek, Psychologist, since 2007, she has been working on preventing risky behavior in cooperation with the Department of Addictology, 1st Faculty of Medicine, Charles University (CUNI). Since 2019, I have been a permanent employee as an assistant professor at CUNI.

She focuses on quality and efficiency in preventing risky behavior and training professionals. She refers to effective strategies in place of risk behavior prevention at international professional meetings, including implementing quality control of primary prevention standards in practice.

In the Czech Republic, she co-founded the Professional Society for the Prevention of Risky Behavior, actively advocates for quality control of standards in practice (certification system) and is dedicated to teaching and training future practitioners in prevention. She's an international trainer of Unplugged, EU-Dap, and a National trainer of the EUPC.

In 2019, EUSPR (European Society for Prevention Research) awarded her the “Leading European Prevention Science Practitioner Honor”.

DAY 3

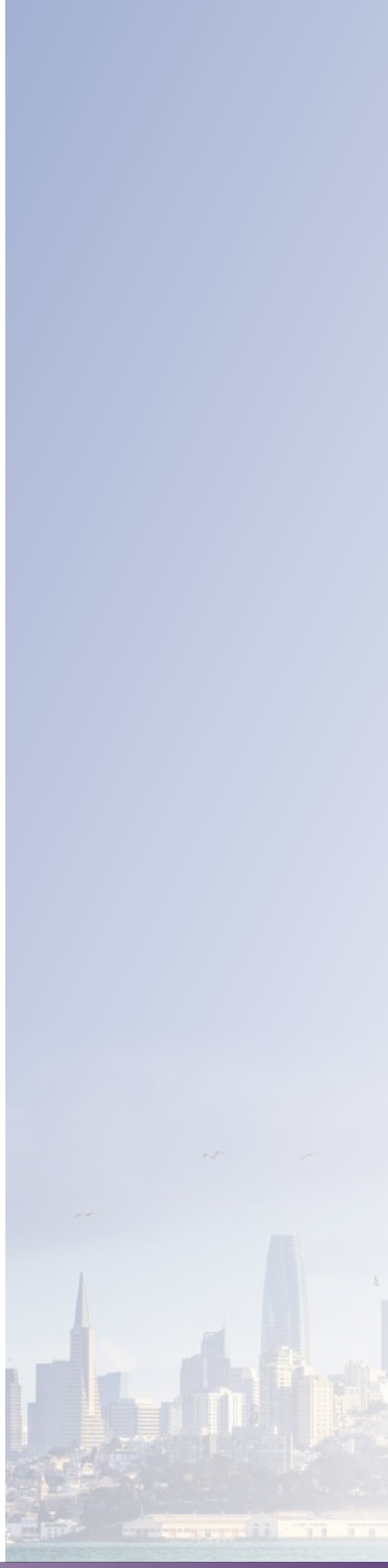
Joint Event

Neurology, Addiction and **Dementia**

World Conference

September 4-6, 2024

California, USA



VIRTUAL ORAL PRESENTATION

An Alternative to Collodion

Esperanza Esguerra Wagner*

Epilepsy Foundation of Arizona, Glendale, United States, USA

There are observable disadvantages to using Collodion.

Collodion causes skin breakdown.

Some patients are ALLERGIC to collodion.

Collodion is flammable and has a strong and unpleasant odor, requiring adequate ventilation.

Electrodes attached with collodion are removed with acetone, which can irritate the skin, especially.

when used on babies and patients in the ICU.

Collodion is difficult to remove, sometimes leaving residue on the patient ‘s scalp, making them.

uncomfortable.

The purpose of this technique is to provide an alternative to doctors and techs who DO NOT want.

to use Collodion.

It will minimize patient discomfort and still provide ahigh-quality EEG recording.

RESULTS/CONCLUSION

The electrodes remain secure on patients with severe seizures and behavioral disorders.

They have low impedance throughout and practically no repairs are needed during long term EEG/video monitoring.

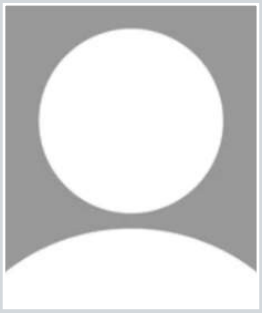
Electrodes are easily removed with water.

Patient feedback is positive, and skin breakdown is avoided.

Collodion IS NOT NECESSARY for long term EEG/video monitoring. This alternative produces a high-quality recording and is beneficial to the patient, especially those ALLERGIC to collodion. I have used this technique since 1996 on HUNDREDS of patients and have seen consistent results.

Biography

Esperanza Esguerra Wagner is a board-certified EEG technologist with Registry No. 93, specializing in epilepsy-related EEG since 2003. She graduated from the inaugural EEG course at the Mayo Clinic, Rochester, Minnesota in 1965. Her career includes positions at prominent Comprehensive Epilepsy Centres, including Phoenix Children ‘s Hospital, AZ, and Presbyterian Hospital, Dallas, TX. With a commitment to patient comfort and diagnostic excellence, Esperanza has pioneered the non-collodion technique for EEG electrode application, advocating for its adoption based on extensive clinical experience and positive outcomes.



Prospective Qualitative Survey of Video Appointments in 2 Canadian Community Neurology Practices

John Maher1*, Leslie Witton1, 1Ontario,

Canada

Introduction: Video appointments between patients and healthcare providers are increasingly common. This prospective study aimed to assess the success rate of video appointments and identify barriers to their use in two community neurology practices in Canada. Methods: Patients under the care of two community neurologists using Ontario-certified Medeo video/QHR EMR were surveyed via email regarding their recent video appointments. A subsequent phone reminder was used to enhance survey completion. Consent was obtained from all participants. A successful video appointment was defined as adequate visual and auditory interaction between the patient and doctor.

Results: Surveys were sent to 178 consecutive patients following their video appointments, with 112 (63%) completing the survey within 30 days. Of these, 103 (92%) reported successful video appointments, while nine patients required a switch to a telephone appointment due to video issues. Most patients (105) logged into their appointments within 10 minutes, although 15 required assistance, and 12 needed helps setting up the video at the appointment time. Only 83% felt adequately informed by the instructional email, and 76 patients saved their login information. Technical issues affected 42 patients, including login problems, video and audio difficulties, session timeouts, and internet connectivity issues.

Conclusion: This survey highlights a high success rate of video appointments in community neurology practices, despite common technical barriers such as login issues, internet connectivity, and audio problems.

Biography

In 2012, I started my current work as an assistant researcher for the City of Scientific Research and Technological Applications (SRTA), the Advanced Technology and New Materials Research Institute (ATNMRI), and the Fabrication Technology Research Department. I got my master's degree in the preparation of a bone scaffolding material from "carbon nanofiber/hydroxyapatite nanocomposite" that can be used for bone regeneration. After that, I had a project from the Egyptian Science and Technology Development Fund and acted as the principal investigator (PI). This project allows me to get training at a cell culture lab to perform cytotoxicity, cell counting, cell viability, and cell morphology experiments at the Department of Functional Materials of Medicine and Dentistry, Wurzburg University, Germany.

After That, I earned my Ph.D degree in the topic of "Developing Injectable Bioactive Borate Glass / Polymeric Nanofiber / Hydrogel Composites for Bone Regeneration''. We prepared the hydrogel composites and studied them in vitro on the cells (biochemically, ELISA, and gene expression) for different time intervals. I have experience as a research member on different research projects, and now I am working on the running one on the formulation of nanofibrous membranes and cylindrical hydrogels for the enhancement of osteogenic properties.

I work on the synthesis of different materials for different applications. Bio-scaffold for bone regeneration, biosensors, drug delivery systems, and water desalination membranes.

Neurological Pathology in Tick-Borne Borrelioses in Kazakhstan

Alibek Adil1*, Andrey Dmitrovskiy1,2, Nailya Ospanbekova1

1Kazakh-Russian Medical University, Almaty, Kazakhstan. 2 National Center for Biotechnology, Almaty branch, Almaty, Kazakhstan

Until now, medical workers in Kazakhstan have had limited awareness and diagnosis of Tick-Borne Borrelioses (TBB). This study aimed to assess the prevalence of TBB, identify neurological manifestations, and establish diagnostic and treatment protocols. A total of 265 patients with fever and 512 individuals bitten by ticks were longitudinally studied using ELISA, alongside PCR testing of 1,500 ticks. Results identified 64 TBB patients, with tick infection rates ranging from 5.3% to 40.6% across regions. Standard TBB case definitions and clinical classifications were developed. Neurological symptoms, including headache (67.7%), dizziness (25.8%), muscle pain (61.3%), and various sensory disturbances, were prevalent. Severe cases exhibited meningeal symptoms (9.7%) and focal neurological disorders (1.6%), often with chronic outcomes without proper antibiotic treatment. Adequate therapy significantly reduced chronic cases and neurological sequelae.

Biography

Alibek Adil, born in Almaty in 1994, completed his bachelor's degree in 2017 and internship in 2019 at Kazakh National Medical University. Currently pursuing a doctoral degree in Infectious Diseases at Kazakh-Russian Medical University, his research focuses on clinical manifestations and epidemiology of borreliosis in Kazakhstan. Alibek is dedicated to advancing medical knowledge and public health through collaborative initiatives and aims to enhance diagnostic and therapeutic strategies for infectious diseases in Kazakhstan and globally.

Sickle Cell Anemia-Induced Psychosis: A Case Report

Tharidu Gunawardena1*, S. Sabti1, F. Sabti1, B. Lansiquot2, N. Cudjoe3

1Eastern Virginia Medical School, Norfolk, USA
2Eastern Virginia Medical School Psychiatry and Behavioral Sciences, Norfolk, USA
3Assistant Professor, Psychiatry and Behavioral Sciences

Sickle cell anemia (SCA) is characterized by abnormal hemoglobin, leading to red blood cell deformities and vaso-occlusive crises. Neurological complications such as silent cerebral infarcts are known in SCA and may contribute to psychiatric symptoms, including psychosis. This case report presents a 29-year-old male with SCA who developed psychosis, exploring the relationship between cerebral infarcts and neuropsychiatric manifestations. The patient exhibited paranoia, aggression, and psychosis exacerbated by non-adherence to SCA treatment and frequent painful crises. The study underscores the potential role of silent cerebral infarcts in cognitive decline and psychosis in SCA, highlighting gaps in understanding and management. It calls for further research into the intersection of SCA, cerebral infarcts, and psychosis to optimize patient care and outcomes.

Biography

Tharidu Gunawardena is a 3rd-year medical student at Eastern Virginia Medical School in Norfolk, Virginia, USA.

Exploring the Efficacy of Osteopathic Manipulative Treatment (OMT) in Fibromyalgia Management

Pranav Reddy*

Rowan-Virtua SOM, Stratford, NJ, USA

Fibromyalgia is a chronic pain disorder characterized by widespread pain, fatigue, and sleep disturbances. Osteopathic Manipulative Treatment (OMT) is a hands-on therapy known for improving musculoskeletal function and various health conditions. This review explores the efficacy of OMT in managing fibromyalgia symptoms based on recent studies. Results indicate that OMT interventions, either alone or in combination with other therapies like gabapentin, lead to significant improvements in pain severity, fatigue, disability, and quality of life. Despite promising findings, studies highlight the need for more extensive, well-controlled trials to establish OMT's role, mechanisms, and optimal treatment protocols in fibromyalgia care.

Biography

Pranav Reddy is a second-year medical student at Rowan-Virtua School of Osteopathic Medicine, NJ, USA. He completed his undergraduate studies in Exercise Science at Rutgers University. Currently, he is actively involved in research under the guidance of Dr. Venkataraman Venkateswar, Dr. Mitchel Kling, and Dr. Ghiath Alnouri, focusing on osteopathic manipulative treatments and their applications in chronic pain management.

Recurrent Thunderclap Headache After Endovascular Embolization of Pial AV Malformation by Onyx Material

Bharath M.M.1*, Vimal Kumar Paliwal1

1Department of Neurology, Sanjay Gandhi Post Graduate Institute of Medical Sciences, Lucknow, India

Thunderclap headache is a sudden severe headache with onset to peak within one minute. Multiple excruciating, short-lived thunderclap headaches over a few days to weeks are highly suggestive of reversible cerebral vasoconstriction syndrome (RCVS). RCVS can be primary or secondary to several factors, but it is rarely described after neuro-endovascular procedures using Onyx material. A 10-year-old child presented with RCVS heralded by recurrent thunderclap headache following endovascular embolization of pial arteriovenous malformation with Onyx material (contains organic solvent dimethyl sulfoxide). Dimethyl sulfoxide is an Angio toxic material that can cause dysregulation of cerebral vascular tone triggering reversible cerebral vasoconstriction syndrome. Recurrent thunderclap headaches after embolization procedures using Onyx material should prompt the diagnosis of reversible cerebral vasoconstriction syndrome.

Biography

Dr. Bharath M.M. completed his postgraduate degree in Internal Medicine in 2022 and is currently pursuing a senior residency in the Department of Neurology at Sanjay Gandhi Post Graduate Institute of Medical Sciences, Lucknow, India. His research interests include Neuromodulation, Headache research, and Demyelinating diseases. Dr. Bharath has authored two peer-reviewed publications and has presented at multiple national platforms.

Intracranial Vein of Galen Malformation And its Management

Zenia Aadil Elavia1, Rohan Raj2, Muhammad Ayaz Tariq3, Moyal Zehra Saad4, Preeti Kumari Yadav 5*, Jubran Al Balushi6, Hend Makky7

1Medical officer, Dr. DY Patil Medical College, India, 2Medical Student, Nalanda Medical College and Hospital, India, 3Medical Student, Quaid-e-Azam Medical University, Pakistan, 4Medical student, Jinnah medical and dental college, Pakistan, 5General Physician, Cama and Albless Hospital, India, 6Medical Student, University College Dublin, Ireland, 7Faculty of Medicine, General Physician, Assiut university, Egypt

Vein of Galen Malformation (VOGM) is a rare congenital arteriovenous malformation affecting pediatric population, characterized by a fistula between the diencephalon and a dilated vein of Galen. The study presents the case of a 6-month-old male infant referred for developmental delays and abnormal head circumference. Clinical examination revealed macrocephaly, dilated scalp veins, and neurological abnormalities. Neuroimaging confirmed a large VOGM with associated hydrocephalus. A multidisciplinary team devised a treatment plan involving endovascular embolization and ventriculoperitoneal shunt placement. Postoperative recovery showed improvement in neurodevelopmental milestones and reduced head circumference. Long-term follow-up revealed successful embolization with decreased arteriovenous shunting. VOGM management requires a comprehensive approach, including early diagnosis, precise imaging, and timely intervention. Endovascular embolization, coupled with other modalities, offers promising outcomes, highlighting the importance of multidisciplinary care and long-term monitoring in optimizing patient prognosis.

Biography

I am a highly motivated and accomplished m edical professional with a robust academic background and extensive clinical and research experience. I hold an MBBS degree and have excelled in various clinical electives in the US, focusing on neurology. My research initiatives have led to multiple peer-reviewed publications and presentations at national and international conferences. Additionally, I have demonstrated leadership and commitment through active participation in professional societies and community service. With a passion for neurology, I am dedicated to advancing my expertise and contributing to the medical field.

Revealing Glial Diversity and Molecular Clocks Across Human Hippocampal Postnatal Lifespan and in Alzheimer's Disease Using Single-Cell RNA-Seq Technology

Yijing Su*, Yi Zhou, Lizhou Wang, Rohana Gullapalli, Eric D. Sun, Yusha Sun, Benjamin C. Kennedy, Sudha K. Kessler, Angela N. Viaene, Ingo Helbig, Minghao Zhang, Peng Hu, David W. Nauen, Anne Brunet, Guo-li Ming and Hongjun Song

Department of Oral Medicine, University of Pennsylvania, USA

The molecular diversity of glial cells in the human hippocampus and their temporal dynamics over the lifespan remain largely unknown. Here we performed single-nucleus RNA sequencing to generate a transcriptome atlas of the human hippocampus across the postnatal lifespan. Detailed analyses of astrocytes, oligodendrocyte lineages, and microglia identified subpopulations with distinct molecular signatures and revealed their association with specific physiological functions, age-dependent changes in abundance, and disease relevance. We further characterized spatiotemporal heterogeneity of GFAP-enriched astrocyte subpopulations in the hippocampal formation using immunohistology. Leveraging glia subpopulation classifications as a reference map, we revealed diversity of glial cells differentiated from human pluripotent stem cells and identified dysregulated genes and pathological processes in specific glia subpopulations in Alzheimer's disease (AD). Together, our study significantly extends our understanding of human glial cell diversity, population dynamics across the postnatal lifespan, and dysregulation in AD, and provides a reference atlas for stem cell-based glia differentiation.

Biography

Yijing su is an assistant professor in the Department of Oral Medicine at School of Dental Medicine at University of Pennsylvania. Dr. Su's work focuses on focuses on investigating the intricate mechanisms governing the gene expression in a cell type-, brain regional-, tissue- and species- specific manner and under physiological and pathological conditions.

Neurophysiological Grading Tool of Ulnar Nerve Entrapment Across Wrist and Across Elbow with Case Presentation

Salim Hirani*

Neurophysiology Department, Ysbyty Gwynedd Hospital, UK

Ulnar nerve entrapment across the elbow (UNEAE) and across the wrist (UNEAW) is the second most common hand entrapment after carpal tunnel syndrome. Few gradings are available for UNEAE and fewer for UNEAW.

The aim of this research is.

1. To create a clinically appropriate ulnar nerve entrapment grading tool to cover both entrapment areas in one research paper.

2. To see the relation of sensory nerve involvement across the wrist with the entrapment across the elbow and to evaluate its effectiveness in terms of compatibility with previous research without any invasive tests like needle EMG examination.

3. Identify the lesions below and across the wrist and elbow to support the clinical physiologist (CP) in grading them properly and help the consultant decide whether to treat them conservatively or surgically.

4. Compare the recording from the first dorsal interosseous (FDI) muscles with the abductor digiti minimi (ADM) muscle to see which muscle is more sensitive and shows early changes in ulnar nerve entrapment.

The proposed revised grading system is based on more nuanced, descriptive categories, ranging from "normal" to "early", "mild", "moderate" and "severe". Some additional clinical grading categories are proposed to create a full grading system for UNEAW and UNEAE.

Biography

Salim Hirani has worked in Neurophysiology for more than 30 years. He completed a Neurophysiology course in the United Kingdom. He has worked in several different countries and can speak four or five languages.

Sheltered Environments for Womxn Who Use Drugs and Who Survive Multiple Situations of Vulnerability and Violence

Aura Roig Forteza*

Metzineres Director, SpainResearch Institute, City of Scientific Research and Technological Applications, Egypt

Metzineres is the first nonprofit cooperative for and by women and diverse genders people who use drugs to survive multiple situations of vulnerability and violence. Metzineres's model of approach is based on the intersectional feminism perspective, harm reduction, and human rights, offering holistic and individualized responses to more than 480 participants. They experience drug-related problems (55%), homelessness (51%), migratory experiences (46%), LGTBIQ+ (25%), sex work (26%), and/or sex for survival (27%), imprisonment (24%), mental health disorders (42%), and functional diversity (13%). An approach capable of responding to all situations where there are potential risks or damages related to drugs, drug use, and public policies. Deploying Safe Spaces, Metzineres offers a rich agenda of productive, cultural, creative, and leisure activities. Among the services provided is a space for accompanied consumption. Although it is not defined as a Supervised Consumption Room, it is a Social Space from which we claim ourselves as neighbors of the neighborhood. We also provide accompaniment and sociolegal advice to womxn who are in legal processes because of the war on drugs and the criminalization of poverty, always working from the logic of solidarity and mutual support among equals. The responsibility to generate genuine, accurate, and up-to-date information drives the team to equip themselves with non-intrusive research tools. It's the womxn who decide how and when they share their biographies. The monitoring and evaluation method is applied as a routine process, allowing us to assess the quality and relevance of the interventions. A database is generated from criteria of technological sovereignty. In continuous construction, new metrics are collected, with indicators defined by recognizing them as experts in their realities.

Metzineres' activism is combined with institutional work. In that sense, Metzineres has been recognized as a Specialized Intervention Service in violence against women for the Catalan Government. This recognition means that the vision of harm reduction is incorporated into the Comprehensive Network of Attention to Male Violence for the first time. I recognized, in addition, that the structural cause of the problems lies not in consumption but in trauma, social injustice, and inequality.

Because of Metzinere's work, there are several impacts on drug policies, such as promoting cross-gender issues in drug-care plans or introducing harm reduction in the networks supporting women surviving violence.

Biography

My background is a social anthropologist with a master's degree in criminology and Sociology of the Penal System at the University of Barcelona. Currently, I am working on my PhD in Medical Anthropology. For more than 20 years, I have been dedicated to drug policy, harm reduction, human rights, and gender mainstream, combining research with the design, implementation, monitoring, and evaluation of drug policies, programs, and services in Spain, Canada, Colombia, and Costa Rica. Also doing advisory work in the USA and EECA Region. In 2016 I moved back to Barcelona to do the first study about women who inject drugs in Catalonia, that was the beginning of the XADUD, Network of Women who Use Drugs. In 2017 Metzineres. Environments of Shelter for Women Who Use Drugs Surviving Violence was born as the first harm reduction program only for women and gender non-conforming people in Spain. In 2020 Metzineres became a non-profit cooperative, where I am the founding director.

Putting an End to Chronic Opioid Use for Chronic Back Pain with the CMECD® Procedure

Roger H Coletti*

Interventional Health, USA

Chronic back pain is likely the most common indication for the chronic use of opioid medications. Even patients who undergo back surgery have a significant risk of chronic back pain. This is called "Post Laminectomy Syndrome" and is reported in 20-40% of patients following back surgery. Chronic muscle spasm is frequently if not predominantly the cause of chronic back pain. Despite the availability of multiple modes of therapy, it is uncommon for cessation of opioid use once begun for this indication. The CMECD® procedure that I have developed and used for the past 15 years provides a unique method of relieving chronic muscle spasms. It involves EMG guidance to identify muscles in chronic spasms demonstrating spontaneous electrical activity (SEA) that is responsible for maintaining the muscle in chronic spasms. Injection to all sites in the muscle demonstrating SEA with a cocktail of phenoxybenzamine/lidocaine/dexamethasone resolves the SEA. The effect is long-lasting as the phenoxybenzamine forms a covalent bond on the alpha-adrenergic receptor and replacement of the inactive receptors takes two to three months. Muscle relaxation and pain relief are immediate and long-lasting. Patient surveys showed statistically significant relief from chronic pain. It was also demonstrated that the length of time the muscle was in spasm did not affect the success in relief of spasm and pain. Muscles in chronic spasms for over 20 years were as successfully treated as those in spasms for a few months. Patients with relief of chronic pain were frequently able to stop use or at least decrease the use of opioid drugs. Phenoxybenzamine is an FDA-approved drug used in an off-label manner in the CMECD® procedure and can be compounded by any sterile compounding pharmacy. Information on the procedure is available at the physician teaching website CMECD.info. The accompanying presentation will provide further background and practical information for the procedure.

Biography

Coletti received a BA from Georgetown University College of Arts and Sciences. He received a Master of Arts from Hofstra University. He received his MD from the State University of New York at Downstate. His medical internship and residency were performed at Nassau County Medical Center in East Meadow, NY. He did two years of cardiology fellowship at Columbia Presbyterian Medical Center in New York and then transferred to Westchester County Medical Center where he completed one year of Interventional Cardiology fellowship. He was awarded FACC, FASNC, and FSCAI fellowship status. My current interests are chronic muscle spasms and pain.

Dementia, Sexuality and the Law- Is the Law Striking the Right Balance?

Oluwatoyin Sorinmade1*, Carmelle Peisah2, Alex Ruck Keene3

1 Kent and Medway NHS and Social Care Partnership Trust, UK
2 School of Psychiatry, University of New South Wales, Australia
3 The Dickson Poon School of Law, King's College, UK

People living with dementia seek intimacy regardless of dementia. This may represent the expression of basic human instincts and needs, e.g. need for companionship, and relief of loneliness, or may represent behavioral difficulties that can occur in dementia.

The legal position is for individuals engaging in sexual relations (e.g. kissing, sexual intercourse etc.), to give "here and now" consent to such activities.
Invariably, the position of the law is that PLWD who have lost the "here and now" ability to consent to sexual relations, should no longer engage in such activities.
Such individuals, especially in care homes, are dissuaded/prevented from engaging in sexual relations "in the interest of their safety" regardless of whether the intimacy seeking behavior is driven by basic human instincts or by behavioral difficulties that can occur in dementia.
A recent qualitative study examined the views of (1). PLWD (2). Partner(s)/carer(s) of PLWD but with unpaid caring responsibilities (3). Carers supporting PLWD in care homes, (4). People over the age of 55 year who do not have a dementia diagnosis and (5). Professionals with expertise in the care of PLWD on whether the position of the law has the right balance between protecting PLWD and supporting them to engage in activities basic to human existence.
The Research findings will hopefully translate to improved quality of care for People Living with Dementia, promote person centered care, as well as interventions that would optimize the quality of life of People Living with Dementia..

Biography

Dr Sorinmade is a Consultant in Old Age Psychiatry with special interest in Mental Health Law, especially the Mental Capacity Act (England and Wales); as well as in empowering the decisional autonomy of older adults and enabling people to live well with dementia. His research interests are on human rights, mental health law as well as improving the quality of lives of older adults. He has publications in the field of old age psychiatry, mental health law and human rights, and on subjects relating to mental health law especially as they affect the older adult population.

Melatonin in Neurodegenerative Disease: Review of Benefits in Alzheimer's Disease and Mild Cognitive Impairment (MCI)

Constantine Kaniklidis*

Research Director, No Surrender Breast Cancer Foundation (NSBCF), USA

Alzheimer's disease (AD) and related dementias remain an under-recognized but critically urgent public health crisis, often devastating in personal and societal impact, and with aggregate costs of $405 billion, projected to rise to $3.3 trillion in 2060, currently affecting 6.9 million older U.S. citizens, 13.8 million in 2060, almost two thirds being women, with Blacks and Hispanics disproportionately affected, and with a lifetime risk of development of 1 in 5. Globally, someone develops dementia every 3 seconds, and these statistics are known to be in fact underestimations.

It is against this bleak context that this review examines the promising potential role of the chrono biotic agent melatonin in widening the spectrum of treatment options for AD and related dementias. Melatonin represents an element of what we call "integrative neurology" along with such other non-pharmacological interventions as exercise, diet, and the normalization of sleep patterns, and one moreover that, unlike conventional agents, shows high tolerability, safety and affordability.

As we demonstrate, melatonin functions as a neuroprotective agent against the pathogenesis of AD. Multiple studies have shown that melatonin can diminish beta-amyloid generation, inhibiting its assembly, and ultimately reducing the risk of the neurodegenerative process, and improving cognitive function and sleep quality in AD patients. These benefits stem, as we show, largely from melatonin's well-documented anti-inflammatory, antioxidant, anti-fibrillogenic, anti-hyper phosphorylating, anti-amyloidogenic activities, and mitochondrial modulatory effects, as well as its powerful immunomodulatory activity against pro-inflammatory molecules. Thus one recent systematic review and network meta-analysis compared over a short term (12+ weeks) the efficacy on cognitive function of supplemental melatonin with donanemab (N3pG), lecanemab (Leqembi), and aducanumab (Aduhelm) in those with mild AD and mild cognitive impairment (MCI), finding that melatonin was significantly more effective than all three agents, and placebo, suggesting that melatonin may be a superior potential disease-modifying therapy against cognitive decline in mild AD and MCI, as also concluded by multiple other studies, reviews, and meta-analyses. In contrast, given continued debate about whether lecanemab's statistically significant benefit of reduction in cognitive decline is in fact a clinically meaningful one, coupled with a narrow benefit/harm ratio given the small but non-trivial risk of brain swelling and bleeding and its high cost has led the American Geriatrics Society to recommend caution in its deployment, reflected in the drug's slow uptake among clinicians.

We discuss these developments here in our own review in the context of melatonin's contribution to this urgent public health crisis, critically surveying the current state of knowledge and assessing the strength of the aggregated evidence to date. We close by examining some exciting developments on the forward horizon, with new synergies, and some promising clinical trials at or nearing completion

Biography

The author, Constantine Kaniklidis, currently serves as Research Director of the No Surrender Breast Cancer Foundation (NSBCF), and is a member of Alzheimer's Association International Society to Advance Alzheimer's Research and Treatment (ISTAART), and of the Society for Integrative Oncology (SIO), exploring the frontier edge of oncology and neurology, as suggested in his recent publication "The Role of Melatonin in COVID-19 Treatment and in Neurocognitive Health - Commentary and Call to Action" [Cur Practice Med Sci, 2022], following up his earlier paper on Melatonin at the Crossroads [Integer Cancer Sci Therapy, 2020].

Novel Five Target Microsurgical Approach in Psychosurgery for Refractory Complex Multipsychiatric Disorders

Mehmet Erkan Ustun*

Neurosurgery, TurkeyApplications, Egypt

This study evaluates the clinical efficacy of a novel psychosurgical technique for patients with complex Mult psychiatric disorders (having more than two disorders) resistant to medication with suicide risk This approach involves a single stereotactic (mini) craniotomy targeting five specific brain regions bilaterally, aiming to yield better clinical outcomes in complex Mult psychiatric disorders than conventional surgical methods.

Background: Psychosurgery remains a critical treatment modality for severe psychiatric disorders that do not respond to standard pharmacotherapy, electro or magnetic stimulation and behavioral therapies and have suicide risk. Cingulate gyrus, anterior capsula and sub caudate tractus are the targets most known and used bilaterally. Lesioning bilaterally the cingulate gyrus (cingulotomy) and sub caudate region (sub caudate tractotomy) together is also known as limbic leucotomy. Limbic leucotomy can be used alone or with capsulotomy (lesioning of anterior capsula). But there are two more targets; genu of the corpus callosum and stria terminalis which may not be suitable for stereotactic lesioning and as these targets are aligned at the same plane with different depths we decided to reach these targets from a single stereotactic craniotomy. As drug-resistant psychiatric cases have more than two disorders which make them complex, in this instance intervention of more targets seem to be more logical to increase the success rate of the surgery. Conventional techniques typically involve one or two bilateral brain regions, which may be inadequate for addressing the intricate neural networks implicated in complex Mult psychiatric pathologies.

Methods: A retrospective analysis was conducted on eleven patients who underwent this psychosurgical procedure from 2016 to 2023. These patients had shown no response to pharmacotherapy psychotherapy and electroconvulsive therapy for durations of 5 to 15 years with a risk of suicide. Follow-ups were conducted at 1-, 3-, 6-, and 12-months post-procedure. All patients exhibited Generalized Anxiety Disorder with various combinations of; Major Depressive Disorder, Obsessive-Compulsive Disorder, Panic Attack, Impulsive Aggressive Behavior due to Impulse Control Disorder, Bipolar Disorder, Phobic Disorder and Psychotic Depression which were resistant to multiple treatment modalities. The procedure encompassed a precoronal parasagittal craniotomy suitable for an anterior interhemispheric approach, followed by bilateral cingulotomy, anterior callosotomy (especially the genu region), bilateral sub caudate tractotomy, bilateral anterior capsulotomy and cutting of the stria terminalis bilaterally.

Results: Remarkable clinical improvements were evident following the surgical intervention. The Beck Depression Inventory (BDI) scores decreased considerably from preoperative scores of 28–45 to postoperative scores of 4–12. Average BDI scores decreased from a preoperative mean of 37.9 to a postoperative mean of 7.7, indicating a significant reduction in depressive symptoms. By the first month of post-surgery, 73% of the patients were able to reduce and at the third month to discontinue psychiatric medications. Only three patients (%27) maintained a single medication until the six-month follow-up which was ceased by our psychiatrist. Postoperative controls were done by the same chief neurosurgery and psychiatry doctors in a double-blind manner.

Conclusion: This micro psychosurgical technique offers a promising advancement in treating combined Mult psychiatric disorders which are therefore refractory to medical treatment. The high rate of remission observed in this study

suggests it may be an alternative to conventional methods. These preliminary findings necessitate further research to confirm the results and optimize treatment outcomes.

Biography

I Completed my medical education at Hachette University, School of Medicine in 1986, I began my career education in Neurosurgery at Ankara University, Avicenna Hospital, and completed in 1992.

In Avicenna hospital, there were famous masters of functional neurosurgery, and I learned a lot from them. In 2009 I got the title of Professor in Neurosurgery and in 2011 completed my doctoral education in the field of Anatomy and got the title of PhD. Now besides standard neurosurgical procedures, I also perform functional neurosurgical operations.

I have over 500 citations in journals listed in SCI (Science Citation Index) or SCI-Expanded.

Lipoprotein Receptors in Neuronal Cholesterol Homeostasis and Function

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Cholesterol homeostasis in the brain, distinct from peripheral tissues due to the blood-brain barrier, remains poorly understood. Lipoprotein receptors from the LDL receptor family (LRPs) are pivotal in lipid particle accumulation systemically. However, their specific roles in brain cholesterol regulation are unclear. We investigated LRPs in Wt. and Lrp-/- mouse brains and a neuroblastoma cell line, finding increased LRP expression under lipid loading but no direct involvement in neuronal lipid uptake. Interestingly, LRPs participate in WNT signalling, exerting anti-apoptotic and anti-autophagic effects crucial for neuronal survival. Our findings underscore LRP's essential role in brain function and survival.

Biography

Dr. Maria Borrell is a senior investigator in the Cardiovascular Program at Hospital de la Santa Creu i Sant Pau, Barcelona. Her research focuses on lipoprotein receptors and their impact on cholesterol metabolism in the vascular system. Dr. Borrell's work has been published in esteemed journals such as EHJ, BRIC, and CVR, and she has secured funding from both government and industry sources for her projects.

Some Practical Hints on Climate Change and Control Towards Sustainable Neurological and Addiction

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The present study explores the intersections of climate change, neurological disorders, and addiction, focusing on sustainable development. Climate change, primarily driven by human activities such as burning fossil fuels, leads to significant shifts in weather patterns, impacting neurological and psychological health. Sustainable Neurological and Addiction Development (SNAD) aims to meet current needs without compromising future generations' ability to address their needs.

This research integrates Climate Impact Assessment (CIA) in addiction treatment plans, programs, policies, and legislative actions targeting alcohol, drug, gambling, and gadget addiction, which are exacerbated by climate change. Street children in major Indian cities such as Mumbai, Delhi, Kolkata, and Chennai are significantly affected by addiction, posing a threat to sustainable development. Effective methods to mitigate this issue through Addiction Impact Assessment (AIA) are crucial.

The study reveals the necessity to incorporate sustainability and environmental considerations into organizational planning and decision-making processes. Developers should integrate sustainable development with climate change mitigation measures to protect future generations. Key elements of climate change, such as temperature variations, humidity, and greenhouse gas concentrations, must be systematically assessed through CIA. The study emphasizes the importance of balanced planning, considering technical, economic, environmental, social, and climate factors.

Global agreements on sustainable development, such as the Kyoto Protocol and the Paris Agreement, underscore the importance of addressing climate change in project planning and decision-making processes. A comprehensive approach, including primary, secondary, and tertiary climate impact studies, is essential to mitigate the adverse effects of climate change on neurological health and addiction. The study proposes the need for Climate Health Impact Assessment (CHIA) to evaluate the health impacts of projects and policies, particularly in the post-COVID world.

In conclusion, the integration of CIA in sustainable development practices is vital for addressing climate change and its impacts on neurological health and addiction, ensuring a balanced and sustainable future.

Biography:

Dr. Vijayan Gurumurthy Iyer studied Environmental Science and Engineering at the Indian School of Mines (now the Indian Institute of Technology), Dhanbad, India, and earned his M. Tech and Ph.D. in 1998 and 2003, respectively. He completed a Post-Doctoral Fellowship at the World Scientific and Engineering Academy and Society (WSEAS) in Athens, Greece, under Prof. Nikos Mastorakis. Dr. Iyer received his D.Sc. (Engg.) and LL.D. degrees in 2010 and 2011 from the Yorker International University and a DL degree in 2011 from the International Biographical Centre, Cambridge, UK. He has published over 460 research articles in peer-reviewed journals and conference proceedings, accumulating over 5000 citations and an h-index of 60. He has authored more than 130 multilingual eBooks.

Succinic Acid Derivatives Prevent Oxidative Damage of Rat Brain Mitochondria in the Huntington's Disease Model

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Huntington's disease (HD) is a progressive neurodegenerative disorder, which is characterized by abnormal aggregation of mutant huntingtin proteins. In neurons they can initiate toxic effects, followed by a cascade of pathogenic mechanisms associated with bioenergetic defects, subsequent excitotoxicity, mitochondrial dysfunction, oxidative stress, transcriptional alterations, and apoptosis.

The influence of 3-oxy-6-methyl-2-ethylpyridine succinate (OMEPS) (50 mg/kg intraperitoneally (i.e.) once per day for 2 weeks) on prooxidant/antioxidant homeostasis of brain mitochondria of rats with modeled Huntington's disease were studied. Mitochondrial toxin 3-nitro propionic acid (3-NPA), which selectively inhibits complex II of the electron transport chain (ETC)(1) was administered at a dose of 10 mg/kg i.e. once per day for 2 weeks to induce HD-like symptoms.

It was registered that the use of OMEPS against the background of 3-NPA intoxication weakened the intensity of oxidative processes in brain mitochondria: the content of secondary products of lipid peroxidation, hydrogen peroxide, and GSSG decreased; and the ratio of GSH/GSSG, activity of ETC including succinate dehydrogenase increased. Values of GSH content, activity and expression of Mn-SOD proteins, as well as glutathione-dependent and NADPH+-generating enzymes were increased in comparison with similar indicators in animals with 3-NPA intoxication. The influences of succinic acid derivatives on protein expression of pro- and anti-apoptotic markers such as p53 and Bcl2 were demonstrated as well. Thus, OMEPS reduced brain mitochondrial damage caused by 3-NPA due to the increasing of protective proteins effects of endogenous antioxidant protection against the background of weakening of both oxidative processes and apoptosis.

Biography:

Olena (Elena) Klyuchko has 3 specialties: PhD (biophysics), Magisterial (computer sciences), and Bachelor (linguistics). She obtained her education in the best Universities of Ukraine, Italy, and Great Britain. She worked as researcher for a long time at Kyiv O.O. Bogomoletz Institute of Physiology and Elbrus Medico-Biological Station of the National Academy of Sciences of Ukraine (EMBS NASU), other institutions. She specialized in biophysics of the brain, the influence of chemicals on organisms, and the development of information technologies for medicine and biology (including an information system for monitoring of chemicals in the environment "EcoIS" with telecommunication elements). Currently, she is an Associate Professor at the National Aviation University (Kyiv,Ukraine); has more than 360 scientific publications.

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