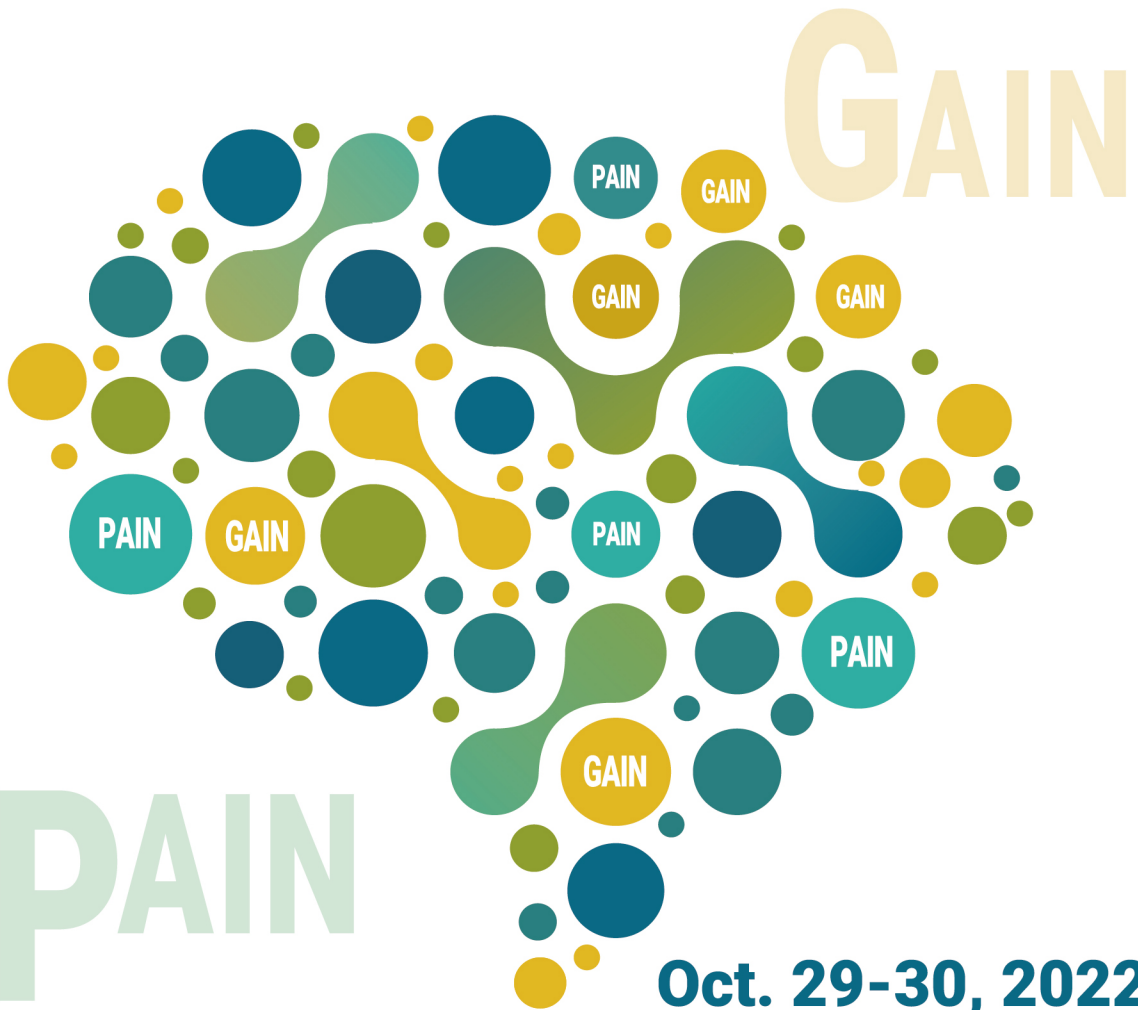




12th Mind-Body Interface International Symposium
PNIRASia-Pacific Symposium

Nociplastic Pain and Neuroplastic Gain in Mind-Body Intervention



Oct. 29-30, 2022
Taichung, Taiwan

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Chairman's Message



Dear Colleagues and Friends,

It is my great pleasure to announce the 12th Mind-Body Interface (MBI) International Symposium is to be held physically in Taichung, as well as going virtual on Oct. 29-30, 2022. Organized annually by Mind-Body Interface Research Center (MBI-lab) at China Medical University Hospital, we are delighted to co-chair this 2-day international conference with the PNIRASia-Pacific Symposium for five consecutive years in a row.

The main theme this year is "Nociplastic Pain and Neuroplastic Gain in Mind-Body Intervention". Pain is a sensation that most of us have experienced at certain point in our lives. Besides from the nociceptive pain (caused by inflammation and tissue damage) and the neuropathic pain (results from nerve damage) that are common in physical and mental disorders, a growing body of evidence has suggested the nociplastic effects or central sensitization may play a crucial role as a chronic stressor and in the development of mood disorders, with inflammation as one link between the two. Moreover, addiction may be the consequence of undertreated nociceptive pain that may acquire our attention. On the other hand, resilience, the results of neuroplasticity, may play a role in stopping or even preventing the pain. Nowadays, efforts have been invested in treatments, such as mindfulness, yoga, meditation, that have been suggested to promote psychological resilience via modulation of the neuronal growth and neurotransmission. Resilience allows the individual to rebound from adversity or pain as a strengthened and more resourceful person.

The MBI International Symposium has been vigorously promoting a global agenda of translational neuroscience by encouraging interdisciplinary research, and integrating biomedical discovery and development focused on patients, to provide better care and service in the field of mental health. The symposium is featured with a broad range of topics, including immunology, metabolic processes and molecular science, psychopharmacology, psychology, addiction science, and the brain-gut-microbe axis as well as biological processes and factors underlying the links between diet, nutrition and mental health from the perspective of Western medicine and traditional Chinese medicine. Furthermore, there will be a strong focus on the use of brave approach and novel technology, artificial intelligence, big data, neuroimaging, personalized medicine, lifestyle intervention, health promotion and disease management, and epidemiology and population studies in brain disorders. Our programme includes keynote speeches, state of the art symposia, oral and poster presentations, as well as Mind-Body Workshop. Early-career researchers are encouraged to join us and bursaries are provided to apply.

MBI Symposium is insightful and inspiring with active discussion among participants. With the great Taiwanese hospitality and richness of cultural and natural heritage of Formosa, the 12th MBI Symposium is guaranteed to be another wonderful event like it has been in the previous years. We look forward to greeting our biomedical researchers, psychiatrists and other health professionals worldwide in Taichung.

Prof. Kuan-Pin Su, M.D., Ph.D.

Chairman, 12th MBI International Symposium

Director, Mind-Body Interface Research Center (MBI-Lab), China Medical University Hospital, Taichung, Taiwan

Deputy Superintendent, An-Nan Hospital, China Medical University, Taiwan

Founding President, Taiwanese Society for Nutritional Psychiatry Research (TSNPR)

Committees

Organizing Committee

Prof. Kuan-Pin Su, M.D., Ph.D. **(Symposium Chairman)**

Professor & Director, Mind-Body Interface Research Center (MBI-Lab), China Medical University Hospital, Taichung, Taiwan

Deputy Superintendent, An-Nan Hospital, China Medical University, Taiwan

Founding President, Taiwanese Society for Nutritional Psychiatry Research (TSNPR)

Dr. Jane Chang, M.D., Ph.D. **(Scientific Committee Chairman)**

Director, Child and Adolescent Psychiatry Division, Department of Psychiatry, China Medical University (CMU) Hospital, Taiwan

Co-director, Mind-Body Interface Research Center (MBI-Lab), China Medical University Hospital, Taichung, Taiwan

Assistant Professor, College of Medicine, China Medical University, Taiwan

President, Taiwanese Society for Nutritional Psychiatry Research

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Secretary-General, Taiwanese Society for Nutritional Psychiatry Research, Taiwan

Researcher, Mind-Body Interface Center, CMU Hospital, Taiwan

Scientific Committee

Prof. Kuan-Pin Su, M.D., Ph.D. **(Symposium Chairman)**

Professor & Director, Mind-Body Interface Research Center (MBI-Lab), China Medical University Hospital, Taichung, Taiwan

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Co-director, Mind-Body Interface Research Center (MBI-Lab), China Medical University Hospital, Taichung, Taiwan

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Prof. Neil Harrison, Ph.D.

Professor of Psychiatry and Neuroimaging, UK

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Past President of PsychoNeuroImmunology Research Society (PNIRS)

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Director, Taiwanese Society for Nutritional Psychiatry Research

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Professor, Immunophysiology, University of Illinois, USA

Editor-in-Chief Emeritus, Journal of Brain, Behavior, and Immunity

Dr S. Senthil Kumaran, Ph.D.

Researcher, China Medical University Hospital, Taiwan

Prof. David Mischoulon, M.D., Ph.D.

Professor, Psychiatry, Harvard Medical School, USA

Depression Clinical and Research Program, Massachusetts General Hospital, USA

Prof. Huan-Xing Su, Ph.D.

Professor, Institute of Chinese Medical Science, Macau

Dr. Cheng-Hao Tu, Ph.D.

Assistant Professor, Graduate Institute of Acupuncture Science, China Medical University, Taiwan.

Prof. Yeon-Ray Wen, M.D., Ph.D.

Associate Professor of China Medical University Hospital | Pain Center

Acknowledgement

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附設醫院



China Medical University
中國醫藥大學



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Taiwanese Society
for Nutritional
Psychiatry Research
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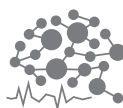
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Continuous Education Credits – Main Conference 研討會繼續教育積分

- Taiwan Medical Association 中華民國醫師公會全國聯合會 (11.7 學分)
- Taiwan Dietitian Association 中華民國營養師公會全國聯合會 (申請中)
- Taiwanese Society of Psychiatry 台灣精神醫學會 (5 學分)
- Taiwanese Society of Child and Adolescent Psychiatry 台灣兒童青少年精神醫學會 (2 學分)
- Taiwan Society of Sleep Medicine 台灣睡眠醫學學會 (3 學分)
- Taiwan Society of Internal Medicine 台灣內科醫學會 (B 類 15 學分)
- Taiwan College of Rheumatology 社團法人中華民國風濕病醫學會 (B 類 2 學分)
- The Chinese Society of Immunology 中華民國免疫醫學會 (3 學分)
- Taiwan Association of Family Medicine 台灣家庭醫學醫學會 (申請中)
- Taiwan Union of Nurses Association 中華民國護理師護士公會全國聯合會 (申請中)
- Taiwan Pain Society 台灣疼痛醫學會 (2 學分)

Continuous Education Credits – Workshop 教育工作坊繼續教育積分

- Taiwan Medical Association 中華民國醫師公會全國聯合會 (專業: 9 學分; 品質: 0.5 學分)
- Taiwan Dietitian Association 中華民國營養師公會全國聯合會 (申請中)
- Taiwanese Society of Psychiatry 台灣精神醫學會 (6 學分)
- Taiwanese Society of Child and Adolescent Psychiatry 台灣兒童青少年精神醫學會 (2 學分)
- Taiwanese Society of Geriatric Psychiatry 社團法人台灣老年精神醫學會 (3 學分)
- Taiwan Society of Sleep Medicine 台灣睡眠醫學學會 (3 學分)
- Taiwan Society of Internal Medicine 台灣內科醫學會 (B 類 10 學分)
- Taiwan College of Rheumatology 社團法人中華民國風濕病醫學會 (B 類 2 學分)
- The Chinese Society of Immunology 中華民國免疫醫學會 (2 學分)
- Taiwan Association of Family Medicine 台灣家庭醫學醫學會 (申請中)
- Taiwan Union of Nurses Association 中華民國護理師護士公會全國聯合會 (9.5 學分)
- Taiwan Pain Society 台灣疼痛醫學會 (2 學分)

Program at a Glance

DATE		Saturday, Oct. 29		DATE		Sunday, Oct. 30	
Venue	Conference Hall, B2	Stanford Room, 2F		Venue	Conference Hall, B2		
08:00-09:00	Registration & Reception			08:30-09:00	Registration		
09:00-09:20	Opening Ceremony & Group Photo			09:00-10:30	S21. Novel Treatment for Depression (90min) Chair: David Mischoulon (USA) Cristina Cusin (USA) Lauren Fisher (USA) Felipe Jain (USA) Albert Yeung (TW)		
09:20-10:00	PK1. Plenary Keynote (40min) Yeon-Ray Wen (TW)			10:30-10:50	Coffee Break		
10:00-10:40	PK2. Plenary Keynote (40min) David Mischoulon (USA)			10:50-11:50	Selected Oral Presentation (60min) WuTe-Ho (TW) Hung-Shih Lin (TW) Yi-Hung Liu (TW)		
10:40-12:20	S11. The Impacts of COVID-19 pandemic Session (100min) Chair: Kuan-Pin Su (TW) Marco Solmi (Canada) Christoph U. Correll (Germany) Esther Melamed (USA)			11:50-12:15	Poster Blitz (25min)		
12:20-13:30	Lunch			12:15-13:50	Lunch		
13:30-14:10	PK3. Plenary Keynote (40min) Neil Harrison (UK)			13:50-15:50	S22. Nutritional Psychiatry (120min) Chair: Wolfgang Marx (AU) Chair: Jane Chang (TW) Annabel S. Mueller-Stierlin (Germany) Angela Sherwin (New Zealand) Calogero Longhitano (AU) Tae Kim (Korea)		
14:10-15:40	S12. PNIRASia-Pacific (90min) Chair: Sarah Spencer (AU) Zhen Zheng (China) Peter Grace (USA) Naomi Eisenberger (USA)	Workshop Interaction 1 (14:10-14:40)		15:50-16:10	Coffee Break		
		Workshop Interaction 2 (14:50-15:20)					
15:40-16:00	Coffee Break	Workshop Interaction 3 (15:30-16:00)		16:10-17:10	S23. Effects of Ketogenic Diet Therapy (60min) Chair: Calogero Longhitano (AU) Zoltan Sarnyai (AU) Christopher Palmer (USA)		
16:00-17:20	S13. Pain Treatment from Eastern to Western Methods Session (80min) Chair: I-Han Hsiao (TW) Chair: Hsien-Yin Liao (TW) Younbyoung Chae (KR)			17:10-17:30	Closing Remark & Award Ceremony		
17:20-18:00	Coach Transfer						
18:00-20:00	Dinner						



Daily Program

Saturday, October 29

Conference Venue: Conference Hall, 2F, China Medical University (Shuinan Campus), Taichung

Gala Dinner Venue: 1F., No. 69, Anhe W. Rd., Xitun Dist., Taichung City, Taiwan (SIZZO Brunch&Bistro)

Facilitator: Mr. Kai-Jie Yang, Ms. Tiffany Chen

08:00-09:00	REGISTRATION & RECEPTION
09:00-09:20	OPENING CEREMONY & GROUP PHOTO
09:20-10:00	PK1. Plenary Keynote 1 Neuromodulation in Chronic Pain Management: Not Only Modulate Pain, but Also Body And Mind Yeon-Ray Wen, Taiwan
10:00-10:40	PK2. Plenary Keynote 2 Placebo Effects: Blessing and Curse David Mischoulon, USA
10:40-12:20	S11. The Impacts of COVID-19 pandemic Session
10:40-10:43	Kuan-Pin Su, Taiwan (Chair)
10:43-11:00	Design of the Collaborative Outcomes Study on Health and Functioning During Infection Times (COH-FIT) Marco Solmi, Canada
11:00-11:20	The effect of the COVID pandemic world-wide: Initial results from the COH-FIT study Christoph U. Correll, Germany
11:20-11:40	Long-COVID: The autoimmune dilemma in neuropsychiatric disorders Esther Melamed, USA
11:40-12:10	Nutritional medicine in the psychoneuroimmunity against long COVID Kuan-Pin Su, Taiwan
12:10-12:20	Discussion
12:20-13:30	LUNCH
13:30-14:10	PK3. Plenary Keynote 3 Inflammation-induced sickness and depression: Insights from human experimental challenge studies Neil Harrison, UK
14:10-15:40	S12. PNIRASia-Pacific Session Pain subtypes and the distinct and overlapping mechanisms behind them.
14:10-14:13	Sarah Spencer, Australia (Chair)
14:13-14:41	Pain phenotypes and their relevance to acupuncture analgesia. Zhen Zheng, China

14:41-15:09	B cell regulation of neuropathic pain Peter Grace, USA
15:09-15:37	Why does rejection hurt? Exploring the shared neural circuitry underlying physical and social pain. Naomi Eisenberger, USA
15:37-15:40	Discussion
15:40-16:00	COFFEE BREAK
16:00-17:20	S13. Pain Treatment from Eastern to Western Methods Session
16:00-16:03	I-Han Hsiao, Taiwan (Chair) Hsien-Yin Liao, Taiwan (Chair)
16:03-16:25	Using novel techniques to investigate pain and depression I-Han Hsiao, Taiwan
16:25-16:50	Clinical Efficacy and Immune Effects of Acupuncture in Patients with Comorbid Chronic Pain and Major Depression Disorder: A Double-Blinded, Randomized Controlled Crossover Study Hsien-Yin Liao, Taiwan
16:50-17:15	Mind-body interaction of acupuncture actions in pain control Younbyoung Chae, Korea
17:15-17:20	Discussion
17:20-18:00	COACH TRANSFER
18:00-21:00	GALA DINNER

Educational Workshops

Workshop Venue: Stanford Room 202, 2F, China Medical University (Shuinan Campus), Taichung

14:10-16:00	Interaction with Speakers of Educational Workshop 1, 2 & 3 (in Mandarin)
14:10-14:40	WS1. Workshop 1 慢性疼痛的評估及治療
14:50-15:20	WS2. Workshop 2 非侵入性腦刺激術在身心整合治療的最新發展
15:30-16:00	WS3. Workshop 3 肥胖的身心整合治療



Sunday, October 30

Conference Venue: Conference Hall, 2F, China Medical University (Shuinan Campus), Taichung

Gala Dinner Venue: 1F., No. 69, Anhe W. Rd., Xitun Dist., Taichung City, Taiwan (SiZZO Brunch&Bistro)

Facilitator: Mr. Kai-Jie Yang, Ms. Tiffany Chen

08:30-09:00	REGISTRATION
09:00-10:30	S21. Novel Treatment for Depression Session Leveraging Placebo Effects and Mind-Body Phenomena in the Treatment of Depression
09:00-09:05	David Mischoulon, USA (Chair)
09:05-09:25	Neurobiological Underpinnings of Placebo Response in Major Depressive Disorder: Methodology of a biomarker study using PET/MRI Cristina Cusin, USA
09:25-09:45	Feasibility and Acceptability of Adapted Cognitive Behavioral Therapy for Depression after Traumatic Brain Injury Lauren Fisher, USA
09:45-10:05	Impact of Mentalizing Imagery Therapy on family dementia caregivers with suicidal ideation: feasibility and diffusion tensor imaging measures Felipe Jain, USA
10:05-10:25	An introduction to Ketamine Assisted Psychotherapy (KAP) Albert Yeung, Taiwan
10:25-10:30	Discussion
10:30-10:50	COFFEE BREAK
10:50-11:50	Selected Oral Presentation
10:50-11:10	The Combination of Repetitive Transcranial Magnetic Stimulation and Electroencephalogram: Experimental Results and Clinical Application WuTe-Ho, Taiwan
11:10-11:30	The Utilization of Electroencephalogram and Repetitive Transcranial Magnetic Stimulation for Case of COVID-19 Brain Fog Hung-Shih Lin, Taiwan
11:30-11:50	Major depressive disorder detection based on EEG signals and machine learning: a systematic and clinical validation on a large dataset collected across hospital in Taiwan Yi-Hung Liu, Taiwan
11:50-12:15	5-min Poster Blitz
11:50-11:55	Early Palliative Care on Psychological Distress in Advanced Cancer Patients: A Meta-Analysis of Randomized Control Trials Ikkbal Andrian Malau, Taiwan

11:55-12:00	Associations between adverse childhood experiences and health outcomes in medical students Chia-Yu Chen, Taiwan
12:00-12:05	The effects of Pilates on pressure and sleep quality of healthcare workers Fei-Yu Su, Taiwan
12:05-12:10	The Effects of Music Type on Reduction of Depressive Symptoms in Music Therapy: A Systematic Review and Meta-analysis of Randomized Controlled Trials Ying-Che Huang, Taiwan
12:10-12:15	Prostaglandins and their receptors in the niacin flush pathway as potential biomarkers for schizophrenia Chi-Wei Chiu, Taiwan
12:15-13:50	LUNCH
13:50-15:50	S22. Nutritional Psychiatry Session Nutrition in Mental Health: Current Trends and Updates
13:50-13:55	Wolf Marx, Australia (Chair) Jane Chang, Taiwan (Chair)
13:55-14:15	Subjective implications of dietary intake and eating behaviours for people with serious mental illness Annabel S. Mueller-Stierlin, Germany
14:15-14:35	Omega-3 PUFAs in Children and Adolescents: Focused on ADHD, ASD and Depression Jane Chang, Taiwan
14:35-14:55	HAPI Trial – High Anxiety Pyrrole Intervention Trial Angela Sherwine, New Zealand
14:55-15:15	Rationale for the use of Ketogenic diet and in Bipolar Affective Disorder and Schizophrenia: the current clinical evidence and a proposed RCT. Calogero Longhitano, Australia
15:15-15:35	Disturbed sleep and circadian rhythm in mice with vitamin D deficiency Tae Kim, Korea
15:35-15:50	Discussion
15:50-16:10	COFFEE BREAK



16:10-17:10	S23. Effects of Ketogenic Diet Therapy Session
16:10:16:13	Calogero Longhitano, Australia (Chair)
16:13-16:30	Nutritional interventions in psychosis review. A brief history of dietary interventions in severe mental disorders and how a low-carb high-fat diet can act as a powerful metabolic enhancer of brain cell function. Calogero Longhitano, Australia
16:30-16:47	From Mice to Men. Effects of ketogenic diet on behavioural models of psychiatry and why the effect might be translatable to humans. Zoltan Sarnyai, Australia
16:47-17:05	The Clinical Use of the Ketogenic Diet in Neurology and Psychiatry Christopher Palmer, USA
17:05-17:10	Discussion
17:10-17:30	CLOSING REMARK & AWARD CEREMONY

Program Details

October 29, 2022

Opening Ceremony

Time: 09:00-09:20

Venue: Conference Hall B2, China Medical University (Shuinan Campus), Taichung

Opening Remark by Symposium Chairman

Prof. Kuan-Pin Su, M.D., Ph.D.

Professor & Director, Mind-Body Interface Laboratory, CMU Hospital, Taiwan

Founding President, Taiwanese Society for Nutritional Psychiatry, Taiwan

Deputy Superintendent, An-Nan Hospital, China Medical University, Taiwan

Opening Remark by Honorary Guests

Prof. Der-yang Cho

Superintendent of China Medical University Hospital

Prof. Mien-Chie Hung

President, China Medical University, Taiwan



PK1. Plenary Keynote1

Neuromodulation in Chronic Pain Management: Not Only Modulate Pain, but Also Body And Mind

Yeong-Ray Wen, M.D., Ph.D.

¹Associate Professor of China Medical University Hospital | Pain Center

²Chief, Center for Pain Treatment and Research, China Medical University Hospital

³Director of Taiwan Pain Society (TPS)

Time: 09:20-10:00

Venue: Conference Hall, 2F, China Medical University (Shuinan Campus), Taichung

Moderator: Chon-Haw Tsai, M.D., Ph.D.

Summary:

Chronic pain is a debilitating and suffering pathological condition, but its impact on individual and society is usually underestimated due to its ordinariness and universality. Chronic pain can be classified as nociplastic pain (e.g. fibromyalgia, complex regional pain syndrome), nociceptive pain (e.g. osteoarthritis, cancer pain), and neuropathic pain (postherpetic neuralgia, migraine), and their underlying mechanisms are complexly interrelated. Many biological, psychological, and social factors can dynamically and interactively influence consequences of chronic pain. Therefore, not all patients are equally affected by chronic pain, and various degree of depression, anxiety, sleep quality, and adverse social responses differently affect outcomes of standard pain therapies. For these patients, the goals of therapy should be tailored towards an improvement of functionalities and quality of life, which might be more realistic than a meaningful pain reduction.

In this talk, I will summarize the modern concepts of chronic pain treatment by using neuromodulation modalities and the target shift for treatment purpose. Traditionally, neuromodulation includes an array of invasive and non-invasive approaches that can be physical (such as electrical, thermal) or chemical (botulinum) by administrative quality, however, pharmacological medications which alter the nerve transmission (e.g. local anesthetic) or circuit connectivity (e.g. anti-depressants) can also exert neuromodulatory effects for pain inhibition. Meanwhile, multidimensional evaluation tools, such as Becks' depression/anxiety inventory (BDI, BAI) for emotional evaluation, Oswestry disability index (ODI) for assessing functional disability in patients with low back pain, Pittsburgh sleep quality index (PSQI) for sleep quality, and EQ-5D-5L for quality of life are included to help quantitating a real-world improvement and satisfaction of treated patients after treatment. Only through these multi-target, multi-modal, and comprehensive neuromodulation pain control and pain evaluation, we can substantially create a patient-centred, opioid-free, cost-effective chronic pain therapy.

PK2. Plenary Keynote2

Placebo Effects: Blessing and Curse

David Mischoulon, M.D., Ph.D.

*Professor of Psychiatry, Harvard Medical School; Depression Clinical and Research Program (DCRP), USA
Massachusetts General Hospital (MGH), USA*

Time: 10:00-10:40

Venue: Conference Hall, 2F, China Medical University (Shuinan Campus), Taichung

Moderator: Chon-Haw Tsai, M.D., Ph.D.

Summary:

Background: Placebo effects--an observed clinical response to an "inert" or "sham" treatment such as a sugar pill--have been demonstrated throughout history in all areas of medicine. The belief on the part of the patient and/or the clinician that a particular treatment will work can contribute to better outcomes in clinical practice. Placebo use in clinical trials has allowed for more rigorous investigations into the efficacy of experimental treatments, to ensure that the results do not occur simply by chance. However, placebo effects have been growing in clinical trials over the past several decades, and this has resulted in many failed trials of new drugs. Efforts at reducing placebo effects are needed to optimize the quality of randomized clinical trials.

Methods: We reviewed the literature regarding placebo effects in medicine, its use as a research tool and how placebo effects may complicate findings in clinical trials of psychiatric treatments. We then examined approaches to minimizing placebo effects in clinical trials.

Results: Placebos are a useful tool in clinical care as well as in research. In clinical trials, the growing rates of placebo response often make it difficult to draw conclusions about the efficacy of treatments. In psychiatry specifically, placebo effects may be greater contributors to clinical response than we would like to think. Recent strategies for reducing placebo response in clinical trials, including the sequential parallel comparison design (SPCD) and the SAFER diagnostic interview demonstrate promise.

Conclusion: Placebo effects must be harnessed for optimal use in clinical care and in research. Novel study designs and other tools for reducing placebo effects in clinical trials appear promising and may ultimately lead to more positive clinical trials of novel drugs as well as increasing patient safety and reducing overall costs of trials.



S11. The Impacts of COVID-19 Pandemic Session

The Impacts of COVID-19 Pandemic

Time: 10:40-12:20

Venue: Conference Hall B2, China Medical University (Shuinan Campus), Taichung

Chair: Kuan-Pin Su, M.D., Ph.D.

Professor & Director, Mind-Body Interface Research Center (MBI-Lab), China Medical University Hospital, Taichung, Taiwan

Deputy Superintendent, An-Nan Hospital, China Medical University, Taiwan

Founding President, Taiwanese Society for Nutritional Psychiatry Research (TSNPR)

Time: 10:43-11:00

Design of the Collaborative Outcomes Study on Health and Functioning During Infection Times (COH-FIT)

Marco Solmi, M.D., Ph.D.

Associate Professor, Neurosciences Department, University of Padua, Italy

Visiting Scholar, King's College, Institute of Psychiatry, Psychology, and Neurosciences, Early Psychosis:

Intervention and Clinical-detection Laboratory (EPIC Lab)

Abstract: The Collaborative Outcomes study on Health and Functioning during Infection Times (COH-FIT) is an international, multi-language (n=30) project involving >230 investigators from 49 countries/territories/regions, endorsed by national/international professional associations.

COH-FIT is a multi-wave, on-line anonymous, cross-sectional survey for adults, adolescents (14-17), and children (6-13), utilizing non-probability/snowball and representative sampling. Key secondary outcomes are a P-extended score, global mental and physical health. Secondary outcomes include health-service utilization/functioning, treatment adherence, functioning, symptoms/behaviors/emotions, substance use, violence, among others.

COH-FIT aims to identify non-modifiable/modifiable risk factors/treatment targets to inform prevention/intervention programs to improve social/health outcomes in the general population/vulnerable subgroups during/after COVID-19. In adults, co-primary outcomes are change from pre-COVID-19 to intra-COVID-19 in well-being (WHO-5) and a composite psychopathology P-Score.

Time: 11:00-11:20

The effect of the COVID pandemic world-wide: Initial results from the COH-FIT study

Christoph U. Correll, M.D.

Professor, Donald and Barbara Zucker School of Medicine at Hofstra/Northwell, Department of Psychiatry and Molecular Medicine, Hempstead, NY, USA

Professor, Charité Universitätsmedizin Berlin, Department of Child and Adolescent Psychiatry, Berlin, Germany

Abstract: High-quality comprehensive data on short-/long-term physical/mental health effects of the COVID-19 pandemic are needed.

Between APR/26/2020 and SEP/04/2022 >185,000 people from 155 countries/territories/regions and six continents have participated. Representative samples of $\geq 1,000$ adults have been collected in 15 countries. Overall, 43.0% had prior physical disorders, 16.3% had prior mental disorders, 26.5% were health care workers, 8.2% were aged ≥ 65 years, 19.3% were exposed to someone infected with COVID-19, 76.1% had been in quarantine, and 2.1% had been COVID 19-positive.

Results from COH-FIT will comprehensively quantify the impact of COVID-19, seeking to identify high-risk groups in need for acute and long-term intervention, and inform evidence-based health policies/strategies during this/future pandemics.

Time: 11:20-11:40

Long-COVID: The autoimmune dilemma in neuropsychiatric disorders

Esther Melamed, M.D., Ph.D.

Assistant Professor, Department of Neurology, Dell Medical School at UT Austin

Research Director, Post-COVID Program, Dell Medical School at UT Austin

Abstract: COVID-19 has affected >600 million people worldwide, with 10-30% of individuals experiencing persistent symptoms as part of Long-COVID or post-acute sequelae SARS-CoV-2 infection (PASC). The most common PASC symptoms in patients are neuropsychiatric in nature, such as difficulty with attention and concentration, memory difficulty, fatigue, depression, and anxiety. The pathophysiology of PASC is not well understood, with possible factors that include persistent SARS-CoV-2 infection, re-activation of herpetic viruses, chronic inflammation, and rise of autoimmunity. This session will cover up to date evidence for proposed pathophysiological mechanisms and treatments of neuropsychiatric PASC with a focus on autoimmunity.

Time: 11:40-12:10

Nutritional medicine in the psychoneuroimmunity against long COVID

Kuan-Pin Su, M.D., Ph.D.

Professor & Director, Mind-Body Interface Research Center (MBI-Lab), China Medical University Hospital, Taichung, Taiwan

Deputy Superintendent, An-Nan Hospital, China Medical University, Taiwan

Founding President, Taiwanese Society for Nutritional Psychiatry Research (TSNPR)

Abstract: The worldwide outbreak of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) has led to the lasting pandemic of coronavirus disease 2019 (COVID-19) and the post-acute phase sequelae of heterogeneous negative impacts in multiple systems known as the "long COVID." Compared to general populations, patients with brain disorders are more vulnerable to COVID-19 infection and post-infection neuropsychiatric complications, in which the mechanisms are multifactorial, including long-term tissue damages from direct CNS viral involvement, unresolved systemic inflammation and oxidative stress,



maladaptation of the dysregulated immunity, the dysfunction of neurotransmitters and hypothalamus–pituitary-adrenal (HPA) axis, and the psychosocial stress imposed by societal changes in response to this pandemic. Accumulating scientific evidence on the strength of safety and efficacy have now been supporting nutritional medicine as a potential intervention and prophylaxis in long COVID. Long chain omega-3 polyunsaturated fatty acids (omega-3 or n-3 PUFAs) might have favorable effects on immunity, inflammation, oxidative stress and psychoneuroimmunity at different stages of SARS-CoV-2 infection. In addition, omega-3 PUFAs and their metabolites, including specialized pro-resolving mediators, accelerate the process of cleansing chronic inflammation and restoring tissue homeostasis, and therefore offer a promising strategy for Long COVID. In this presentation, I will review the clinical and pre-clinical evidence of potential application of omega-3 PUFAs against long COVID and call for more clinical studies to investigate the role of nutritional intervention in the psychoneuroimmunity against long COVID-19.

PK3. Plenary Keynote3

Inflammation-induced sickness and depression: Insights from human experimental challenge studies

Neil Harrison, Ph.D.

Professor of Psychiatry and Neuroimaging, UK

Director of Clinical and Translational Imaging: CUBRIC

Honorary Consultant Psychiatrist

Time: 13:30-14:10

Venue: Conference Hall, 2F, China Medical University (Shuinan Campus), Taichung

Moderator: Lu-Hai Wang, Ph.D.

Summary:

Inflammation is increasingly implicated in the pathogenesis of depression. For example, during chronic interferon-based therapy for Hepatitis-C up to a third of patients develop new-onset major depressive episodes. In patients with idiopathic depression, inflammation (e.g. CRP >3mg/L) is associated with greater treatment resistance to conventional antidepressants and conversely, anti-cytokine therapies that block systemic inflammation have been demonstrated to have anti-depressant properties. In this talk I will discuss how human experimental medicine studies using diverse pro- and anti-inflammatory therapies have helped us identify how systemic inflammation acts on the brain to disrupt human mood, motivation and cognition. I will highlight the often-striking similarities between these brain circuits and those implicated in the aetiology of idiopathic depression. Finally, I will present some new data showing how novel experimental and imaging approaches may offer new insights into the role of (micro)glia in human neuropsychiatric disorders.

S12. PNIRASia-Pacific Session

Pain subtypes and the distinct and overlapping mechanisms behind them.

Time: 14:10-15:40

Venue: Conference Hall, 2F, China Medical University (Shuinan Campus), Taichung

Chair: Sarah Spencer, Ph.D

Professor and Head, Neuroendocrinology of the Obese Brain Research Group Deputy Leader, Neurodevelopment in Health and Disease Program School of Health and Biomedical Sciences RMIT University, Australia

Summary:

Pain appears as a range of subtypes from acute, stabbing, gone-in-60 seconds, to prolonged ache, to chronically recurring, to the social pain of losing a loved one. There are no precisely agreed-upon categories, but most of our understanding includes distinction between acute, chronic, neuropathic, nociceptive and radicular. Recent thinking adds social pain to this list and there is much overlap between the subtypes in terms of mechanisms and manifestation. Neuroinflammation plays a key role in all of these, with neuroinflammatory mechanisms linked to chronic, neuropathic, and depressive pain. Neuroinflammation may go some way to explain why individuals respond differently to the same painful stimulus. In this symposium we will discuss subtypes of pain and the distinct and overlapping mechanisms behind them. Associate Professor Zhen Zheng from RMIT University in Australia will speak about her work on **pain phenotypes and their relevance to acupuncture analgesia**. Associate Professor Peter Grace from the MD Andersen Cancer Centre, Texas, in the USA will address **B cell regulation of neuropathic pain**. Finally, Professor Naomi Eisenberger from the UCLA Department of Psychology in Los Angeles, USA, will discuss why does rejection hurt? **Exploring the shared neural circuitry underlying physical and social pain**. Together these talks will address the neurocircuitry behind different subtypes of pain, the contribution of the neuroinflammatory milieu to this pain, and potential therapeutics such as acupuncture that might be more beneficial for some subtypes than others. We aim to present a novel cross-section of global research on the mechanisms behind pain.

Time: 14:10-14:13

Pain phenotypes and their relevance to acupuncture analgesia.

Zhen Zheng, Ph.D.

Associate Professor in Chinese Medicine School of Health and Biomedical Sciences RMIT University, Victoria, Australia

Abstract: Background: Individuals vary in endogenous pain controls, which influences on how the body responds to a painful stimulation. Conditioned pain modulation (CPM) and pain adaptability (PA) are the two major forms of pain controls, which can be used to classify pain phenotypes. The relevance of pain phenotypes acupuncture analgesia has not been thoroughly studied. We aimed to understand if



individual CPM and PA impacted on the effectiveness of acupuncture, and if forms of acupuncture were an factor.

Methods: PA and CPM were assessed in healthy human volunteers (n = 22, study 1) and in patients with chronic pain (n = 35, study 2), respectively. Cold pressor was the conditioning stimulation, and pressure pain thresholds were the testing stimulation and measured at the site of tests or pain. In Study 1, minimal and real acupuncture were administered. In study 2 only real acupuncture at or close to the pain sites were applied. Appropriate statistical analyses were used.

Results: Study 1 showed that pressure pain threshold in those adaptive to pain increased significantly after minimal acupuncture than in those who were not adaptive to pain. In study 2, among people with chronic pain, CPM was efficient in some whereas poor in others. Those with poor CPM reported more pain relief after acupuncture.

Conclusion: People being adaptive to pain respond better to minimal acupuncture; whereas those with poor CPM gain better pain relief from acupuncture. How acupuncture is delivered should be tailored to individual phenotype of endogenous pain control.

Time: 14:41-15:09

B cell regulation of neuropathic pain

Peter Grace, Ph.D.

Associate Professor, Anderson Cancer Center, Houston, TX

Chair ad interim, Department of Symptom Research

Abstract: Our unbiased transcriptome screens suggested that enhanced B cell signaling is an under-appreciated consequence of injury. New data will be presented to demonstrate that B cells are necessary for initiation of neuropathic pain. We show that constitutive deficiency or pharmacological depletion of B cells protects male and female mice from neuropathic pain. As the key mechanism, antibodies secreted by differentiated B cells form complexes with autoantigens induced by the sterile injury, and activate Fc gamma receptors along the pain neuraxis. Together, these data implicate a new cell signaling axis in maintaining pain after traumatic nerve injury.

Time: 15:09-15:37

Why does rejection hurt? Exploring the shared neural circuitry underlying physical and social pain.

Naomi Eisenberger, Ph.D.

Professor of UCLA Department of Psychology, USA

Abstract: Numerous languages characterize 'social pain,' the feelings resulting from social rejection or loss, with words typically reserved for describing physical pain ("broken hearts," "hurt feelings") and perhaps for good reason. It has been suggested that, in mammalian species, the social attachment system borrowed the computations of the physical pain system in order to prevent the potentially harmful consequences of social separation. In this talk, I will use a combination of behavioral and neuroimaging methodologies

to explore the notion that physical and social pain rely on overlapping neural and experiential processes. Specifically, I will examine: 1) whether social pain activates pain-related neural circuitry, 2) whether individual differences in sensitivity to one kind of pain relate to individual differences in sensitivity to the other (e.g. *Are individuals who are more sensitive to physical pain also more sensitive to social pain?*), and 3) whether factors that up- or down-regulate one type of pain affect the other in a similar manner (e.g., *Can physical painkillers reduce social pain?*).

S13. Pain Treatment from Eastern to Western Methods Session

Pain Relief from The Perspective of Eastern and Western Medicine

Time: 16:00-17:30

Venue: Conference Hall, 2F, China Medical University (Shuinan Campus), Taichung

Chair: I-Han Hsiao, M.D., Ph.D.

Attending Physician of Neurosurgery Department, Taiwan

Director, Ward of Neurosurgery Department, Taiwan

Chair: Hsien-Yin Liao, Ph.D.

Assistant Professor, College of Chinese Medicine, School of Post-Baccalaureate Chinese Medicine, China Medical University, Taichung, Taiwan

Summary: Pain is a worldwide healthcare concern and the most common purpose for people seeking medical intervention. Pain is also the body's alarm for damage, even though it is might not be immediately life threatening. However, if it progresses to chronic pain, it can worsen the quality of life. Chronic pain is defined as pain that persists for over three months. The International Association for the Study of Pain (IASP) categorized chronic pain into primary and secondary pain. In this session, we have three speakers to introduce pain treatment from Eastern to Western methods. We also have clinical trials and novel optogenetic and chemogenetic techniques to determine pain mechanisms. We believe that these findings reported in this session are relevant to the scope of MBI symposium and will be of interest to the audiences.

Time: 16:00-16:25

Using novel techniques to investigate pain and depression

I-Han Hsiao, M.D., Ph.D.

Attending Physician of Neurosurgery Department, Taiwan

Director, Ward of Neurosurgery Department, Taiwan

Abstract: Background: How to precisely investigate the mechanisms of electroacupuncture on pain control is a big issue. Recent studies have shown that central sensitization also plays an important role in nociceptive sensations such as fibromyalgia, neuropathic pain, and peripheral inflammatory pain. Therefore, we established pain models of mice and used electroacupuncture to clarify the regulatory pathway.



Methods: We established mice pain models and used 2 Hz electroacupuncture stimulation to treat pain. We also investigated whether optogenetic and chemogenetic modulator can moderate the analgesic and antidepressive effect of electroacupuncture.

Results: The mechanical and thermal hyperalgesia can be attenuated by electroacupuncture or Trpv1 gene deletion. Pain signalling transducers such as HMGB1, S100B and TRPV1 increased in several nuclear of fibromyalgia mice, and these increasing could be reversed by electroacupuncture or Trpv1 gene deletion. In addition, although electroacupuncture has obvious analgesic effect on inflammatory pain in mice, it can be reversed by optogenetic modulating the second / third layer of somatosensory cortex. Western blot and immunofluorescent showed that electroacupuncture could reduce pain signalling transmission from dorsal root ganglion to posterior horn of spinal cord, somatosensory cortex and anterior cingulate gyrus. Furthermore, acupuncture significantly reduced depressive behaviour in the obesity mice. Chemogenetic manipulation at medial prefrontal cortex reliably reverse the depression behaviours.

Conclusion: Electroacupuncture can inhibit the pain signal pathway related to TRPV1 and pCaMKII. Optogenetic and chemogenetic techniques can accurately activate or inhibit the somatosensory cortex or prefrontal cortex to reverse the effect of electroacupuncture. Our results provide a novel method to overcome pain and depression.

Time: 16:25-16:50

Clinical Efficacy and Immune Effects of Acupuncture in Patients with Comorbid Chronic Pain and Major Depression Disorder: A Double-Blinded, Randomized Controlled Crossover Study

Hsien-Yin Liao, Ph.D.

Assistant Professor, College of Chinese Medicine, School of Post-Baccalaureate Chinese Medicine, China Medical University, Taichung, Taiwan

Abstract: Background: Depression and pain have a high co-occurrence and correlated molecules. Acupuncture is often used to manage pain or depression. However, few controlled clinical trials with sound methodologies have examined the efficacy and immune effects of acupuncture in comorbid chronic pain and major depressive disorder, and thus, further investigations are warranted.

Method: We performed a subject- and assessor-blinded, crossover, and randomized controlled clinical trial to investigate whether acupuncture can effectively treat comorbid chronic pain and major depressive disorder and modulate the proinflammatory cytokines of patients with such comorbidities. Acupoints for pain and depression were used in separate interventions. Scores on depression scale, pain scale, quality of life scale, and inflammatory cytokines were used as outcome measures.

Result: 47 patients met the inclusion criteria and were randomly assigned to the depression–pain sequence group (n = 23) or pain–depression sequence group (n = 24). After 14 weeks acupuncture, between targeting acupoints for depression and pain groups, there were no significant changes in Hamilton Depression

Rating Scale (-4.59 ± 6.021 ; -6.69 ± 6.610), Brief Pain Inventory Scale (-0.28 ± 1.877 ; -0.97 ± 1.689), and cytokines.

Conclusion: Targeting the acupoints for pain might not produce superior analgesic than targeting the acupoints for depression, and vice versa. The selected inflammatory cytokines in the present study might link pain and depression and explain the no significance of depression and pain scales.

Time: 16:50-17:15

Mind-body interaction of acupuncture actions in pain control

Younbyoung Chae, Ph.D.

Professor in Dept. of Meridian and Acupoints, College of Korean Medicine, Kyung Hee University, Korea

Abstract: Acupuncture uses needles to stimulate a particular part of the body for the purpose of inducing beneficial clinical effects. It has been applied for a wide variety of disorders, though application to analgesia has attracted the most scientific interest in the past few decades. Humans perceive somatic sensations by integrating afferent signals and higher cognitive processes. Experiences and expectations prior to tactile stimulation can influence the perception of somatic sensations. I will provide a brief introduction of the placebo needle in this talk and demonstrate how top-down acupuncture components influence the acupuncture effect. Touch, insertion, and healing ritual are all part of acupuncture treatment, which also pays attention to needle-based treatments and incorporates somatosensory stimulation. Even a placebo needle contains tactile stimulation, improved doctor-patient communication, physical sensation, and treatment expectations. These elements can influence the placebo analgesic effect and finally come together to form a medical context. An important component that affects physiological reactions during acupuncture stimulation is body ownership, improved bodily attention, and anticipation of stimulus. Further scientific study of the effects and underlying processes of acupuncture may benefit from an understanding of the top-down elements of the treatment.



Interaction with Speakers of Educational Workshop 1, 2 & 3 (in Mandarin) 教育性工作坊講師互動時間 (中文預錄課程)

Time: 14:10-16:00

Venue: Stanford Room, 2F, China Medical University (Shuinan Campus), Taichung

*課程影片於大會官網播放期間：2022/10/20-2022/11/19

WS1. Workshop1 慢性疼痛的評估及治療

Time: 14:10-14:40

Organizer: Kuan-Pin Su, M.D., Ph.D.

Professor & Director, Mind-Body Interface Research Center (MBI-Lab), China Medical University Hospital, Taichung, Taiwan

Deputy Superintendent, An-Nan Hospital, China Medical University, Taiwan

Founding President, Taiwanese Society for Nutritional Psychiatry Research (TSNPR)

Organizer: Yeong-Ray Wen, M.D., Ph.D.

Associate Professor of China Medical University Hospital | Pain Center

Organized by Prof. Kuan-Pin Su and Prof. Yeong-Ray Wen, this educational workshop aims to provide a core curriculum on fundamental knowledge of translational research and clinical assessments and treatments for chronic pain and discuss the interaction of depression-pain comorbidity, as the conditions often coexist, respond to similar treatments, exacerbate one another, and exhibit common biological connections, such as neurocircuitry, neuroplasticity, and inflammation. The workshop will be compiled by seven topics delivered by experts from Taiwan. The course is conducted in Mandarin.

本教育工作坊是由蘇冠賓教授及溫永銳教授召集台灣在相關領域最專精的七位臨床專家，依據他們的專業角度，介紹他們如何評估及治療這些慢性疼痛病人，同時，更重要的是，如何整合身、心反應與疼痛治療，將病人的疼痛以全人看待，而不是單一的系統或解剖病變。課程以中文進行，提供最有效率與優質的教育訓練課程。本課程以線上學習、播放預錄影片的方式進行，大會活動期間學員能與專家主講人進行線上互動，課程結束後亦將提供醫事人員繼續教育積分及上課證明。

WS1 課程大綱

慢性疼痛的身心整合評估與共同照護

Kuan-Pin Su, M.D., Ph.D. 蘇冠賓

Director, Mind-Body Interface Research Center (MBI-Lab), China Medical University Hospital, Taichung, Taiwan

Deputy Superintendent, An-Nan Hospital, China Medical University, Taiwan

Founding President, Taiwanese Society for Nutritional Psychiatry Research (TSNPR)

課程摘要： Chronic pain and major depressive disorder (MDD) cause major clinical, social and economic burdens on patients and their families. The treatment cost of pain alone is equivalent to more than a fifth

of the total health expenditure of developed countries, while MDD is a severe psychiatric illness with a high lifetime prevalence rate of up to one-fifth. Pain and depression are often comorbid: Approximately 35% of participants with chronic pain also had comorbid depression, while 43% of individuals who met the criteria for MDD also had a chronic painful physical condition (CPPC). In this presentation, I aim to discuss the interaction of depression-pain comorbidity, as the conditions often coexist, respond to similar treatments, exacerbate one another, and exhibit common biological connections, such as neurocircuitry, neuroplasticity, and inflammation. In this educational workshop, I aim to provide a core curriculum on fundamental knowledge of translational research and clinical assessments and treatments for chronic pain.

慢性疼痛病人的特性及疼痛科的介入治療簡介

Chih-Peng Lin, M.D., Ph.D. 林至芃

Chief, Division of Pain Medicine, Department of Anesthesiology, National Taiwan University Hospital

課程摘要：疼痛是生命體維持存活所必需的保護機制，然而當疼痛持續的時間太久太過嚴重，慢性疼痛就是一種會導致病患失能的疾病。而墜入慢性疼痛幽谷的病患常會合併憂鬱及睡眠障礙等合併症，更會嚴重影響病患執行正常的家庭及社會功能。

本演講除介紹慢性疼痛病患的特性外亦將簡介慢性疼痛病患的治療方式，除了無窮盡的使用止痛藥物與接受手術間，近年蓬勃發展的所謂疼痛介入性治療 (Interventional pain management) 是慢性疼痛病患的另一種選擇，例如大家或曾耳聞的神經阻斷乃是將傳遞疼痛的神經進行暫時麻痺甚至是永久性破壞，或是調控痛覺傳遞效率的神經調控處置。我們將以實際案例與各位夥伴分享疼痛介入性治療如何能以微創的方式，降低病患的疼痛並改善生活品質。

軟組織也會痛不欲生與多元化的注射治療

Ke-Vin Chang, M.D., Ph.D. 張凱閔

Medical Doctor, National Taiwan University Hospital, Bei-Hu Branch, Taiwan

Department of Physical Medicine and Rehabilitation, Taiwan

課程摘要：軟組織，包含皮下脂肪、筋膜、肌肉、肌腱與神經，都可能是疼痛的來源。正確的臨床評估與診斷，是治療成功的必要關鍵。近年來，超音波影像技術的突飛猛進，讓體表的軟組織皆能清楚區辨，並且可以作即時的動態檢查與導引注射。而注射的藥物多元多樣，包含有局部麻醉劑、類固醇、葡萄糖溶液與自體血小板濃縮液等，不同的注射液在不同的軟組織病變類型，都扮演著不同的角色。本演講除了介紹如何由臨床徵狀，與理學檢查，來推斷軟組織疼痛的成因，並且如何使用高解析度超音波協助診斷，以及如何選擇恰當的注射液來達到理想的治療效果。

營養是疼痛控制不可缺的一環

Jen-Yin Chen, M.D., Ph.D. 陳貞吟

head of Anesthesiology of Chi Mei Medical Center, Tainan, Taiwan

課程摘要：慢性疼痛應採用個人化、多模式、跨團隊的治療方法，包括藥物治療、心理治療、侵入性手術和整合治療。輔助和整合健康療法包括營養、心理和身體。營養方法包括中草藥、維生素和礦物質、魚油和益生菌。2012年的一份報告顯示，營養補充品的使用在成年人的十種常見



輔助和整合健康療法中名列第一。

營養素對疼痛治療概念：以維生素 C 與 D 為例，簡介如下

1. 了解維生素 C/D 缺乏與產生疼痛的可能分子機轉
2. 維生素 C/D 血漿濃度各區間的臨床意義與缺乏原因
3. 治療目標的最小有效濃度概念
4. 維生素 C/D 缺乏、不足、欠佳在健康者、神經痛者與腫瘤病人的盛行率
5. 口服生物可用率、吸收率影響因子
6. 治療路徑選擇 (口服 vs. 靜脈滴注)、安全性與劑量建議

最後分享兩例治療案例。

神經性疼痛問題及神經調控治療

Sheng-Tzung Tsai, M.D., Ph.D. 蔡昇宗

Resident, Neurosurgeon of Taipei Veterans General Hospital, Taipei, Taiwan

課程摘要：中樞大腦脊髓與週邊神經損傷後除了造成運動與感覺功能損傷與喪失之外，常因為斷裂的神經連結造成異常的大腦神經迴路，這在許多神經醫學影像的研究上都已經得到證實，甚至同時併發情緒的困擾與精神疾病。雖然在介入性疼痛治療的進步下許多患者都得到很大的進步，但是還是有部份的患者仍然受困於疼痛。近年在晶片與神經工程的進步下，藉由外科晶片植入手術與神經調控來改變異常並回復神經可塑性，已經顯著改善部分患者的疼痛問題與生活品質，甚至進一步增強疼痛患者的神經功能，我們將在這個課程之中分享這些手術的進步，疼痛改善的程度以及神經醫學影像的證據。

正念減壓課程於慢性疼痛的應用

Wei-Nung Teng, M.D., Ph.D. 鄧惟濃

Secretary-General, Taiwanese Society for Nutritional Psychiatry Research, Taiwan

Researcher, Mind-Body Interface Center, CMU Hospital, Taiwan

課程摘要：六個月以上的疼痛，稱為慢性疼痛，疼痛系統發生了一些問題，當疼痛訊號持續存在的時候，會讓腦袋跟身體的神經特別敏感，變成疼痛訊號在不需要產生的時候仍然產生，不斷的向腦袋傳送疼痛的感覺。正念是一種特別的身心訓練，學習在一切環境不變的情況下，仍能夠為自己做些有益且滋養身心的事情。長期慢性疼痛容易誘發強烈的無能為力與孤立無援的感受，正念練習，幫助我們開發自己內在擁有、卻長期被忽略的能力，溫柔疏導這股負面能量，幫助我們發展對疼痛有更多元的對待方式。即便在疼痛時，仍然能照顧好自己，教導病友們面對疼痛的心理與生活調適，學習透過自我覺察及知性的訓練，駕馭疼痛對個人的影響；藉由增加對疼痛與正念的瞭解，可以降低疼痛對生活的影響、降低疼痛程度，並且增加疼痛應變能力，增加正向思考能力而改善睡眠品質。課程主題包括甚麼是慢性疼痛、正念減壓練習帶來的改變、正念減壓團體推廣經驗分享。

了解非癌慢性疼痛患者的心理健康以提升團隊照護的助益

Ling-Jun Liu, M.D., Ph.D. 劉玲均

Clinical Psychologist, Anesthesiology Department of Changhua Christian Hospital, Taichung, Taiwan

課程摘要：疼痛是非常惱人的身 - 心狀態，哈佛醫學院的神經學教授 Clifford Wolff 曾經在 2010 年發表的其中一篇論文中寫過一段關於疼痛的描述，翻譯成中文大致是這樣的意思：「疼痛跟愛情一樣佔據了你的心神，一旦出現了，什麼也不再重要了，且會讓人束手無策」。

從心理學的角度來看，自疼痛一開始出現，攫取了患者的注意力，患者怎麼樣去解讀這個疼痛，採取什麼策略和行為模式去因應這些疼痛，乃至於這些疼痛慢性化後如何影響到患者的心理健康或甚至造成接近失能的狀態，以及這些不成功的因應策略為什麼會被保留下來，都是臨床心理師在評估慢性非癌疼痛患者的心理健康時，會去一層一層抽絲剝繭探討的問題。接著再將這些評估結果帶進團隊討論，除了能讓團隊看見阻礙患者進步的心理 / 動機 / 人格因素和風險，也讓臨床工作者更能從身 - 心 - 靈各個面向去完整的看見一個「人」，協助這個「人」漸漸擺脫「疼痛病人」的角色，促進這個「人」的功能進步且找回生活角色。

WS2. Workshop2 非侵入性腦刺激術在身心整合治療的最新發展

Time: 14:50-15:20

Organizer: Galen C.L. Hung, M.D.

Taipei City Psychiatric Center, Taipei City Hospital, Taiwan

Professor & Director, Mind-Body Interface Laboratory, CMU Hospital, Taiwan

President, Taiwanese Society for Nutritional Psychiatry, Taiwan

Organizer: Kuan-Pin Su, M.D., Ph.D.

Professor & Director, Mind-Body Interface Research Center (MBI-Lab), China Medical University Hospital, Taichung, Taiwan

Deputy Superintendent, An-Nan Hospital, China Medical University, Taiwan

Founding President, Taiwanese Society for Nutritional Psychiatry Research (TSNPR)

Organized by Prof. Kuan-Pin Su and Dr. Galen C.L. Hung, this workshop would address the core knowledge for translational research from bench to bedside, and the biological mechanisms underlying the brain modulation to therapeutic effects.

And also illustrate the latest advances of repetitive transcranial magnetic stimulation (rTMS), including its application on fibromyalgia and combination with psychotherapy. Meanwhile, new stimulation methods including transcranial direct-current stimulation (tDCS) and photobiomodulation therapy (PBT) will be introduced. This workshop also provides essential knowledge for the advanced hands-on training.

此教育工作坊邀請最專精的五位臨床專家，課程以中文進行。本工作坊將綜覽各種 NIBS 在研究與臨床的最新實證資料，包括 rTMS 在纖維肌痛症的應用，以及 rTMS 與心理治療如何併用。涵蓋未來 rTMS 實作演練課程前之必備核心知識。本課程以線上學習、播放預錄影片的方式進行，大會活動期間學員能與專家主講人進行線上互動，課程結束後亦將提供醫事人員繼續教育積分及上課證明。



WS2 課程大綱

非侵入性腦刺激治療憂鬱症之轉譯研究及生物機轉的核心概念

Kuan-Pin Su, M.D., Ph.D. 蘇冠賓

Professor & Director, Mind-Body Interface Research Center (MBI-Lab), China Medical University Hospital, Taichung, Taiwan

Deputy Superintendent, An-Nan Hospital, China Medical University, Taiwan

Founding President, Taiwanese Society for Nutritional Psychiatry Research (TSNPR)

課程摘要： The clinical studies of non-invasive brain stimulation (NIBS), such as repetitive transcranial magnetic stimulation (rTMS), transcranial direct current stimulation (tDCS), cranial electrical stimulation (CES), or transcranial photobiomodulation (PBM), in the treatment of psychiatric disorders have recently demonstrated promising therapeutic outcomes. Consequently, the clinical applications of specific NIBS devices have been approved by the US FDA and European MDR in treating major depression, bipolar disorder, smoking cessation, insomnia, and/or obsessive-compulsive disorder. However, it remains inconclusive and elusive to explain how and why these NIBS work at the basis of functional brain activity, cognitive and affective processes, neurochemical regulation, and even molecular biology. Moreover, we still need more clinical observation and research to consolidate standard treatment guidelines and better clinical outcomes.

In the 12th MBI International Conference, we launch a much-anticipated educational workshop. In this session, I would address the core knowledge for translational research from bench to bedside, and the biological mechanisms underlying the brain modulation to therapeutic effects.

rTMS 在疼痛治療的應用

Jiunn-Horng Kang, M.D, Ph.D. 康峻宏

Director, College of Biomedical Engineering of Taipei Medical University, Taiwan

課程摘要： 非侵入性腦刺激 (NIBS) 可以有效調節區域大腦神經元的興奮性，並改變大規模的大腦網路活性。研究發現，也是治療多種慢性疼痛疾病的一種潛在方式，包含了偏頭痛、神經性疼痛、纖維肌痛、幻痛、肌筋膜疼痛和複雜區域疼痛。美國 FDA 也已核准應用重複經顱磁刺激 (rTMS) 進行偏頭痛治療的醫療器材使用。關於經顱磁刺激在慢性疼痛中的應用，有幾個潛在的機制還在研究中。目前經顱磁刺激治療慢性疼痛的主流部位主要是初級運動 (M1) 和皮層以及背側前額皮層 (DLPFC)。雖然證據也表明經顱磁刺激在慢性疼痛治療中的潛在療效。儘管如此，經顱磁刺激的最佳設置 / 劑量和長期效果仍需在未來進一步研究。

結合神經調節與心理治療維持治療效果

Tze-Chun Tang, M.D., Ph.D. 唐子俊

President, Tang's Psychiatric Clinic and Mind Center, Taiwan

課程摘要： 難以治療的精神疾病，例如憂鬱和思覺失調強迫症等。描述的是經過了兩種藥物和藥物

加其他形式的治療無效，如何採取有效的策略促進功能的恢復 10 分重要。非侵入性的腦刺激包括電療以及 TMS, 對於難治療型的憂鬱有一定程度的效果。累積足夠次數的 TMS 腦刺激治療，可以達到滿意的反應和緩解率，如何維持已經達到的治療效果減少復發十分重要。整合分析發現，TMS 腦刺激治療，可以當作維持治療，有效的預防復發。特定形式的心理治療，也可以和腦刺激治療結合，維持治療的效果及減少復發。課程內容會討論，腦刺激治療的效果，以及維持治療的必要性。長期追蹤研究發現，心理治療當作維持治療也可以有效延長效果和減少復發。兩者之間的結合，如何運用在臨床上，以及研究的發現會加以討論。目的在維持原來治療的改善幅度，以及減少復發，對頑抗型治療個案，提供治療的希望。

FDA 通過的強迫症治療 rTMS 儀器

Po-Han Chou, M.D. 周伯翰

Attending Physician, Department of Psychiatry, CMU Hsinchu Hospital, Hsinchu, Taiwan

課程摘要：約有 1/3 強迫症患者屬於治療頑強型 (treatment refractory)，此演講內容包括強迫症的大腦迴路機轉，與介紹目前美國 FDA 核可用來治療強迫症的 rTMS 儀器

Photobiomodulation：新興腦刺激術

Hsin-An Chang, M.D. 張勳安

Chief, Division of Child and Adolescent Psychiatry, Department of Psychiatry, Tri-Service General Hospital, Taiwan

課程摘要：光生物調節運用紅光或近紅外光來刺激，修復，再生，及保護受損，退化或瀕死組織。大腦罹患不同疾病可概分三類：創傷性，退化性，精神疾病（憂鬱、焦慮、創傷壓力症等等...）。證據顯示光生物調節術照射頭部對這些不同疾病是有益的；在健康人上，有認知強化潛力。穿顱光生物調節術，近紅外光常被用於放置於前額，因其吸收較好（無頭髮，波長較長）。使用光源包括雷射與發光二極體陣列。迄今累積證據，穿顱光生物調節治療憂鬱症是安全耐受且具有前景，需大型隨機對照試驗進一步證實。此工作坊涵蓋光生物調節術的機轉並摘錄重要臨床試驗結果。

tDCS 在腦神經科學相關應用進展以憂鬱症和認知疾患為例

Che-Sheng, Chu, Ph.D. 朱哲生

Attending Doctor, Kaohsiung Veterans General Hospital, Kaohsiung, Taiwan

課程摘要：經顱直流電刺激術是一種非侵入性腦刺激術，近幾年來廣泛應用在憂鬱症以及神經認知疾患，經顱直流電刺激術的好處是價格相對便宜以及容易操作，因此獲得醫學界更多的關注，甚至目前也有居家型的經顱直流電刺激術可以攜帶回家使用。另外，目前亦有高精準度經顱直流電刺激術，這類技術可以提供更精準的腦區刺激，且可以達到相對深層的皮質區，進而達到相對應的療效。本工作坊內容，我將介紹經顱直流電刺激術在憂鬱症及神經認知疾患的應用。



WS3. Workshop3 肥胖的身心整合治療

Time: 15:30-16:00

Organizer: Jane Chang, M.D., Ph.D.

Director, Child and Adolescent Psychiatry Division, Department of Psychiatry, China Medical University (CMU) Hospital, Taiwan

Co-director, Mind-Body Interface Research Center (MBI-Lab), China Medical University Hospital, Taichung, Taiwan

Assistant Professor, College of Medicine, China Medical University, Taiwan

President, Taiwanese Society for Nutritional Psychiatry Research

Organizer: Chih-Kun Huang, M.D.

Director, Body science & Metabolic disorders International Medical Center, CMU Hospital, Taiwan

Organized by Dr. Jane Chang and Dr. Chih-Kun Huang, this educational workshop aims to provide a core curriculum on Mind-Body Integrated Intervention on Obesity. The workshop will be compiled by five topics delivered by experts from Taiwan. The essence of this workshop is to serve as the foundation of intergrated intervention on obesity. With an interdisciplinary approach of research to integrate biomedical discovery and development, the enhancements of nutritional medicine in the prevention, concurrent treatment and wellbeing of mental health will be promoted.

此教育工作坊由台灣營養精神醫學研究學會張倍禎理事與黃致錕院長召集，邀請國內五位專家在課程講授肥胖與身心的整合治療。本工作坊的目的在提供有興趣進入該領域的專業人員最新知識以及未來實作演練的基礎。本課程以線上學習、播放預錄影片方式進行，提供最有效率的教育訓練。大會活動期間學員能與專家主講人進行線上互動，課程結束後亦將提供醫事人員繼續教育積分及上課證明。

WS3 課程大綱

誰控制體重：是腦還是荷爾蒙？

Chih-Kun Huang, M.D. 黃致錕

Director, Body science & Metabolic disorders International Medical Center, CMU Hospital, Taiwan

課程摘要：體重管理與肥胖治療一直都是醫界的軟肋，從各國肥胖人口不停增加，重度肥胖病人比率持續攀升便可看見端倪。過去肥胖治療著重在自控式的飲食運動，然而長期成效不彰，而隨著研究進展，賀爾蒙的角色開始受到醫界的重視。

胃腸道擁有大腦之外最複雜的神經系統，這裡分布著多達上億個神經細胞；除了消化功能，還會放出各種胃腸荷爾蒙，影響全身大小器官，包括大腦。正是因為這些荷爾蒙對大腦傳達了訊號，我們才會有飢餓感或飽足感。這些會影響食慾的荷爾蒙包括了：Ghrelin (飢餓素) · CCK (膽囊收縮素) · PYY (多肽 YY) · OXM (泌酸調節素) · GLP-1 (昇糖素類似肽)。

而身體的脂肪組織也是一個典型的內分泌組織。它也會分泌許多物質如脂肪酸、酵素、細胞素 (cytokine) 等，以影響自己與其它組織的能量代謝生理功能如瘦素 (leptin)、脂締素 (adiponectin) 及阻抗素 (resistin)。

除此之外，目前已知與肥胖相關的賀爾蒙如：雌激素、胰島素、腎上腺素，和生長激素等也都參與了體重與熱量平衡的過程。

此次演講，將以國際研究與實例作為內容，帶大家進入肥胖的荷爾蒙治療新視界。

肥胖藥物治療新世紀

Wen-Yuan Lin, M.D, Ph.D. 林文元

Associate Director, Center Of Health Evaluation And Promotion, CMU Hospital, Taiwan

課程摘要：減重治療之一般處置以非藥物治療為先，藥物治療只適用於肥胖的病人且經過飲食、運動治療、行為改變後仍無法達到其目標體重減輕者並經醫師詳細評估過後才適用。在決定開始藥物治療及藥物的選擇前，應與病人討論潛在的好處與限制，包括藥物作用的方式、不良反應、監控需求，以及對於病人減重動機的潛在影響。減重藥物使用適用於肥胖病人 BMI ≥ 30 kg/m² 或是 BMI ≥ 27 kg/m² 且至少有一種合併症 (高血壓、第二型糖尿病或血脂異常等)，使用在成年人體重控制，當成搭配低卡飲食與適當運動的輔助藥物治療。目前在我國核准適用於肥胖治療的藥物且有長期療效之證據的有三種：

- (1) Orlistat，是一種胰臟和腸道脂肪分解酵素的抑制劑
- (2) Liraglutide，該藥是作用在 Glucagon-like peptide-1 (GLP-1) 接受體的促效劑，可抑制人體食慾中樞，使食慾下降、並且藉由降低胃排空而增加飽足感
- (3) Naltrexone/Bupropion ER，為複方藥，藥物主要作用於下視丘及中腦邊緣系統路徑，增加飽足感，而減少食物的攝取。

手術刀：肥胖治療的最後防線

Ming-Che Hsin, M.D. 辛明哲

Chief, Body science & Metabolic disorders International Medical Center, CMU Hospital, Taiwan

課程摘要：以目前所有的實証資料中，減重手術是對抗肥胖及代謝疾病最為有效及持久的方法。但是開刀這個充滿未知與想像的名詞，常常阻止了我們進一步改善肥胖與代謝疾病的機會。課程中我們會介紹減重手術的發展，與現在減重及代謝手術的樣貌。減重手術在腹腔鏡設備的發展後有了更安全及更有效的治療成果，而減重手術的發展也讓科學界在肥胖的治療上發現並開創了許多新的領域，也發現肥胖的治療是個身心密不可分的世界。課程同時會說明目前減重代謝手術的指引，手術效果，優點與缺點，讓與會者對手術有初步的了解！



胃鏡縫胃新玩意

An-Ti Chang, B.S 張安迪

Attending Physician, Gastroenterology and Hepatology, CMU Hospital, Taiwan

課程摘要：減重治療一般由內科治療開始，飲食控制、心理介入、加強運動及藥物，效果較為有限，且很容易有復胖的問題，對於病態性肥胖的患者，大多就會需要外科手術的介入，效果非常好，但畢竟是手術，通常需要住院個幾天及 1-2 周休息，對於那些反覆內科治療，失敗又復胖，進入無止盡的無限輪迴，或者體重還沒有到那麼重一定需要外科手術，又或者因為諸多考量還不希望接受外科手術的患者，近年來因為內視鏡治療而有新的治療選擇，主要就是利用胃鏡，到我們的胃裡面來做治療，比如胃內肉毒或胃內水球，但上面 2 種治療方法有時效性的問題；近年有一種最新的內視鏡袖狀胃整形術，又叫胃鏡縮胃手術，利用胃鏡帶著特殊的縫線系統，進到胃裡將胃從裡面縫起來，讓本來像囊袋狀的胃縮小成為管狀，約莫可以減少 70% 的體積，以達到模擬外科袖狀胃手術的型態與效果，依據統計平均可以減少 20-25% 的體重，特色是沒有傷口，可以門診手術，當天就可以下床活動進食，隔天就可以恢復一般生活及上班。

減肥的美麗與哀愁～漫談飲食疾患與憂鬱症

Jane Chang, M.D., Ph.D. 張倍禎

Director, Child Psychiatry Division, Department of Psychiatry, CMU Hospital, Taiwan

Director, Taiwanese Society for Nutritional Psychiatry Research, Taiwan

課程摘要：我們會發現常常在心情不好的時候，就會想要來一杯甜甜的手搖飲或一片黑森林巧克力蛋糕，讓自己開心一點。其實不是我們貪吃，而是肥胖與我們的情緒有著密切的關係。除了肥胖常常共病憂鬱症之外，有時減肥減過頭也會很容易有憂鬱情緒。這堂課程將帶大家認識肥胖和憂鬱的流行病學與共同的病理機轉，並進一步探討壓力性飲食與肥胖的關係。最後會帶大家認識三種不同的飲食疾患：厭食症，暴食症與狂食症和目前的治療方式。

Gala Dinner

Time: 18:00-21:00

Venue: SiZZO Brunch&Bsitro

Dinner Speech by Symposium Chairman

Dr. Jane Chang, M.D., Ph.D.

Director, Child and Adolescent Psychiatry Division, Department of Psychiatry, China Medical University (CMU) Hospital, Taiwan

Co-director, Mind-Body Interface Research Center (MBI-Lab), China Medical University Hospital, Taichung, Taiwan

Assistant Professor, College of Medicine, China Medical University, Taiwan

President, Taiwanese Society for Nutritional Psychiatry Research

Prof. Kuan-Pin Su, M.D., Ph.D.

Professor & Director, Mind-Body Interface Research Center (MBI-Lab), China Medical University Hospital, Taichung, Taiwan

Deputy Superintendent, An-Nan Hospital, China Medical University, Taiwan

Founding President, Taiwanese Society for Nutritional Psychiatry Research (TSNPR)



October 30, 2022

S21. Novel Treatment for Depression

Leveraging Placebo Effects and Mind-Body Phenomena in the Treatment of Depression

Time: 09:00-10:30

Venue: Conference Hall, 2F, China Medical University (Shuinan Campus), Taichung

Chair: David Mischoulon, M.D., Ph.D.

Director, Depression Clinical and Research Program, Massachusetts General Hospital, Boston, MA, USA

Joyce R Tedlow Professor of Psychiatry, Harvard Medical School, Boston, MA, USA

Summary:

This session will explore a variety of topics related to mind-body medicine, including placebo effects, and approaches to treatment of various psychiatric conditions using novel strategies. Dr Mischoulon will Chair the symposium and present a brief introduction to the topics. Dr Cusin will present her findings from a clinical trial specifically focusing on placebo effects in depression. Dr Fisher will present her work on a novel cognitive behavioral therapy (CBT) protocol for treatment of individuals with depression and traumatic brain injury (TBI). Dr Jain will present his latest findings on Mentalizing Imagery Therapy (MIT) to promote resiliency in caregivers of individuals with dementia; and Dr Yeung will present on an exciting new intervention, ketamine assisted psychotherapy (KAP), for use in mood disorders.

Time: 09:00-09:25

Neurobiological Underpinnings of Placebo Response in Major Depressive Disorder: Methodology of a bio-marker study using PET/MRI

Cristina Cusin, M.D.

Associate Director, Depression Clinical and Research Program, Massachusetts General Hospital, USA

Associate Professor of Psychiatry, Harvard Medical School, USA

Abstract: Background: Placebo response is a major obstacle in clinical trials of pharmacotherapies for major depressive disorder (MDD). We designed a double-blind, placebo-controlled, randomized clinical trial to investigate biological mechanisms underlying placebo response in MDD, using neuroimaging and behavioral probes of reward responsiveness. We hypothesized that the mesolimbic DA system is critically implicated in the placebo effect.

Method: We randomized 76 adults with moderate to severe MDD to active drug (bupropion XL; 300 mg) or placebo, using a sequential parallel comparison design to maximize the number of placebo responders. A monetary incentive (MID) task was performed during the PET/MR scan to probe striatal DA release during reward anticipation, reward consummation, and reinforcement learning. We investigated specific regions of interest for association with the two phases of reward including the NAc, caudate, putamen, globus pallidus, and dACC. Activation changes in each of region were examined for relationships with learning.

Integrated PET-MR technology measured changes in extracellular DA concentration during the MID task by analyzing the displacement of [(11)C]raclopride, a radiotracer which enhances detection sensitivity of D2/D3 receptor. Pre-to-post changes in reward circuitry function between baseline and follow-up (4 weeks later) examined differential responses to bupropion vs. placebo. Neural activity of non-responders was measured to investigate biosignatures for treatment resistant depression (TRD).

Results: Initial imaging and clinical findings will be presented.

Conclusion: This multi-modal study examining placebo response during clinical trials for MDD will lay the foundation for prospective studies investigating the neurobiological bases of the placebo phenomenon.

Time: 09:25-09:45

Feasibility and Acceptability of Adapted Cognitive Behavioral Therapy for Depression after Traumatic Brain Injury

Lauren Fisher, Ph.D.

*Director of Clinical Services, Depression Clinical and Research Program, Massachusetts General Hospital
Assistant Professor in Psychiatry, Harvard Medical School, USA*

Abstract: Background: About 50% of patients hospitalized for traumatic brain injury (TBI) develop Major Depressive Disorder (MDD) in the first year after injury. Although Cognitive Behavioral Therapy (CBT) is a gold standard treatment for depression, there is limited evidence of its efficacy for individuals with TBI. Furthermore, CBT assumes adequate cognitive functioning, which is problematic for individuals experiencing cognitive sequelae post-TBI. This study examined the feasibility, acceptability, and preliminary efficacy of CBT that was adapted to account for cognitive sequelae after TBI and delivered in-person and remotely due to the COVID pandemic.

Method: A 12-week, manualized, individual CBT for depression was developed to account for cognitive sequelae after TBI (CBT-TBI). Eligible participants endorsed clinically significant depression [Inventory of Depressive Symptoms–Clinician rated (IDS-C) ≥ 23 or MDD diagnosis] and history of moderate-to-severe TBI. Forty-two individuals were randomized to 12 weeks of CBT-TBI ($n=21$) or waitlist ($n=21$). Feasibility and acceptability were assessed by examining attendance and treatment satisfaction [Satisfaction with Therapy and Therapist Scale-Revised (STTS-R); scores range from 6-30, higher scores indicate greater satisfaction]. Preliminary efficacy of CBT-TBI was evaluated by comparing change in depressive severity (IDS-C) after 12 weeks of treatment compared to waitlist control.

Results: About 98% of randomized participants completed the initial 12 weeks of study participation. Of those who initiated CBT-TBI, 90% completed the 12-week intervention. Satisfaction with therapy (STTS-R) was high ($M=26.6$, $SD=3.2$). Efficacy results are currently under analysis.

Conclusion: Preliminary data support the feasibility and acceptability of CBT-TBI delivered in-person and remotely.



Time: 09:45-10:05

Impact of Mentalizing Imagery Therapy on family dementia caregivers with suicidal ideation: feasibility and diffusion tensor imaging measures

Felipe Jain, M.D.

Director of Healthy Aging Studies, Depression Clinical and Research Program, Massachusetts General Hospital, USA

Assistant Professor of Psychiatry, Harvard Medical School, USA

Abstract: Background: Mentalizing Imagery Therapy (MIT) is a “second wave” mindfulness therapy that incorporates principles of mentalizing (self and other understanding) into guided imagery and mindfulness skills. Family caregivers of persons with dementia experience high rates of depression and suicidal ideation (SI). Here we describe new findings from a randomized, controlled trial of MIT: (1) feasibility for caregivers with SI and (2) diffusion tensor imaging (DTI) changes.

Method: 46 family dementia caregivers were assigned to receive MIT or a support group. Both groups consisted of 4 weekly meetings. 23 participants (50%) were identified with suicidal ideation at baseline. Measures of feasibility included dropout rate, attendance, and home practice. Effects on depression and SI were analyzed. In the total sample, DTI data was collected on a 3T Prisma Siemens. Frontal tracts were identified that corresponded to a prefrontal functional connectivity network. Fractional anisotropy and axial diffusivity were correlated with depression and mindfulness.

Results: There were no dropouts among caregivers with SI. Rates of attendance and home practice were high. Depressive symptoms and SI improved more in the MIT group than in the support group ($p=.002$ and $p=.015$, respectively). Across all participants, fractional anisotropy and axial diffusivity negatively correlated with an increase in mindfulness ($p<.005$ for both), but there was no relationship with depression.

Conclusions: MIT was feasible for family dementia caregivers with SI. DTI measures correlated with mindfulness but in a different direction than hypothesized. Potential reasons for differences in DTI change between this study and prior mindfulness studies are explored.

Time: 10:05-10:25

An introduction to Ketamine Assisted Psychotherapy (KAP)

Albert Yeung, M.D., Sc.D.

Director of Primary Care Studies at the Depression Clinical and Research Program at the Massachusetts General Hospital, USA

Associate Professor, Harvard Medical School, USA

Abstract: Background: Ketamine-assisted psychotherapy (KAP) is the administration of ketamine alongside traditional psychotherapy to treat depression, anxiety, PTSD, OCD, chronic pain, and other mental health conditions. The therapeutic effect is theorized to come from physiological effects of the psychedelic, the mindset of the participants to seek treatment and tap into their inner healing intelligence with the support of therapists. The therapeutic setting, including the room, sounds, lighting, smells, comfort, and safety are

also key to success in KAP.

Method: Ketamine's therapeutic effects are believed to stem from its antagonism of NMDA receptors prompting synaptic potentiation and proliferation. Ketamine also causes varying degree of dissociation and altered state of consciousness which is also considered therapeutic in KAP. People who receive lower doses of ketamine frequently go into a trance similar to a deep meditative state. Higher doses of ketamine are associated with out-of-body and mystic experience while the participant continues to maintain conscious awareness. The ketamine experience promotes a time-out from the ordinary mind, offers relief from negativity and access to suppressed memories. It is characterized by a sense of humility, self-acceptance, peacefulness, absence of negative emotions, and increase in positive affect, love and connectedness. After the ketamine session, therapists provide integration sessions to help participants process their issues with new outlooks from the ketamine journey, and integrate insights to move forward with their lives.

Results: Existing evidence on the safety, side effects and effectiveness of KAP will be discussed.

Conclusion: Empirical support for KAP is limited but growing and promising.

Selected Oral Presentation

Time: 10:50-11:50

Venue: Conference Hall B2, China Medical University (Shuinan Campus), Taichung

Moderator: Kuan-Pin Su, M.D., Ph.D.

Time: 10:50-11:10

The Combination of Repetitive Transcranial Magnetic Stimulation and Electroencephalogram: Experimental Results and Clinical Application

Te-Ho Wu, Ph.D.

Distinguished Professor, National Yunlin University of Science and Technology

Abstract: Background: Since its debut in 1985, transcranial magnetic stimulation (TMS) has been widely studied for various applications to neuropsychiatric diseases. Although repetitive TMS (rTMS) was approved by FDA for medication resistant depression in 2008 and it also showed its effects on the treatment, there is still a lack of objective and conventional evaluation. Electroencephalogram (EEG) has been long an easy tool to evaluate the state of brain function. Since the effects of TMS come from the induced electric currents by Faraday's Law, it is reasonable to evaluate the shift of EEG as the results of TMS given that EEG represents the change of extracellular electric field.

Methods: First, we measured the EEG of a healthy subject then calculate the weighted frequency of the alpha band. Then we used rTMS with weighted frequency to stimulate the subject. We repeated the EEG immediately after the stimulation and calculated again. New frequency was applied in the next rTMS courses. Totally three rTMS courses and four EEGs were performed. On the base of alternative EEGs and rTMS of healthy subject, we applied this neuromodulation on a 44-year-old male patient who has had medical resistant depression.

Results: The results of healthy subject demonstrated that using the frequencies generated by EEGs



to stimulate could boost the power and synchronization of alpha band which was dominant when the subject was conscious. The increase of power went first then synchronization followed, especially in occipital region, despite the stimulation site was in frontal region. The results of depressive patient showed similar findings. Furthermore, the brain mapping demonstrated a decrease of frontal alpha band which was one of the typical figures of depressive patients. As the frequency band and brain mapping changed, there was also an improvement in clinical.

Conclusion: In our preliminary results, simultaneous EEGs measurement and rTMS seem to be another choice of neuromodulation for depressive patient. Further research is necessary to clarify the effects.

Time: 11:10-11:30

The Utilization of Electroencephalogram and Repetitive Transcranial Magnetic Stimulation for Case of COVID-19 Brain Fog

Hung-Shih Lin, M.D., Ph.D.

Department of Neurosurgery, Mackay Memorial Hospital, Taipei, Taiwan

Abstract: Background: Although it is not a medical diagnosis, brain composes of sluggish or fuzzy thinking, impaired memory, confusion, and difficulty in focus. In general, this can be cause by stress, sleep disorder, or other

illnesses. After the outbreak of COVID-19, an increasing number of patients suffered COVID-19 brain fog. Since the symptoms of brain fog represents the dysfunction of the brain, electroencephalogram (EEG) plays

a role in the evaluation of brain condition due to its convenience. Repetitive transcranial magnetic stimulation (rTMS) has long been a tool to modulate brain function. Here, we demonstrate the EEG changes of a patient with COVID-19 brain fog before and after rTMS.

Methods: Before rTMS, we measured the EEG of a 29-year-old male who reported impaired memory, sluggish thinking, and difficulty in concentration after recovery from COVID-19. After the acquisition of EEG,

we analyzed it with quantitative methods and calculated the weighted frequency. Then we used rTMS with weighted frequency to stimulate the patient over Fz. After rTMS, EEG was acquired again.

Results: Before rTMS, the EEG revealed lower alpha band power in the frontal region. There was an increase of the power of alpha band in frontal region in second EEG. These results indicated that rTMS with weighted frequency could raise the power of alpha band. Patient reported sharper thinking and better concentration.

Conclusion: rTMS seems to be one of the modalities to help ameliorate the symptoms of brain fog while EEGs can be a useful tool to evaluate neurological condition before and after neuromodulation.

Time: 11:30-11:50

Major depressive disorder detection based on EEG signals and machine learning: a systematic and clinical validation on a large dataset collected across hospital in Taiwan

Yi-Hung Liu, Ph.D.

*Professor, Dept. Mechanical Engineering, National Taiwan Univ. of Science and Technology, Taiwan
Co-founder, Hipposcreen Neurotech Corp. (HNC), Taiwan*

Abstract: Background. Major depressive disorder (MDD) is a global healthcare issue and one of the leading causes of disability. Machine learning combined with electroencephalography (EEG) has recently been shown to have the potential to diagnose MDD. However, most of these studies analyzed small samples of participants recruited from a single source, raising serious concerns about the generalizability of these results in clinical practice. Thus, it has become critical to re-evaluate the efficacy of various common EEG features for MDD detection across large and diverse datasets.

Method. we collected resting-state EEG data from 400 participants across four medical centers and tested classification performance of four common EEG features: band power (BP), coherence, Higuchi's fractal dimension, and Katz's fractal dimension. Then, a sequential backward selection (SBS) method was used to determine the optimal subset. To overcome the large data variability due to an increased data size and multi-site EEG recordings, we introduced the conformal kernel (CK) transformation to further improve the MDD as compared with the healthy control (HC) classification performance of support vector machine (SVM).

Result. The results show that (1) coherence features account for 98% of the optimal feature subset; (2) the CK-SVM outperforms other classifiers such as K-nearest neighbors (K-NN), linear discriminant analysis (LDA), and SVM; (3) the combination of the optimal feature subset and CK-SVM achieves a high five-fold cross-validation accuracy of 91.07% on the training set (140 MDD and 140 HC) and 84.16% on the independent test set (60 MDD and 60 HC).

Conclusion. The current results suggest that the EEG coherence-based connectivity is a more reliable feature for achieving high and generalizable MDD detection performance in real-life clinical practice.



5-min Poster Blitz Awardees

Time: 11:50-12:15

Venue: Conference Hall B2, China Medical University (Shuinan Campus), Taichung

5PB001	Associations between adverse childhood experiences and health outcomes in medical students Chia-Yu Chen, Taiwan
PP002	The effects of Pilates on pressure and sleep quality of healthcare workers Fei-Yu Su, Taiwan
PP013	The Effects of Music Type on Reduction of Depressive Symptoms in Music Therapy: A Systematic Review and Meta-analysis of Randomized Controlled Trials Ying-Che Huang, Taiwan
PP014	Prostaglandins and their receptors in the niacin flush pathway as potential biomarkers for schizophrenia Chi-Wei Chiu, Taiwan
PP017	Early Palliative Care on Psychological Distress in Advanced Cancer Patients: A Meta-Analysis of Randomized Control Trials Ikbal Andrian Malau, Taiwan

S22. Nutritional Psychiatry

Nutrition in Mental Health: Current Trends and Updates

Time: 13:50-15:50

Venue: Conference Hall, 2F, China Medical University (Shuinan Campus), Taichung

Chair: Wolfgang Marx, Ph.D.

*Alfred Deakin Postdoctoral Research Fellow of Department of Medicine, Deakin University, Australia
Postdoctoral Research Fellow and Head of the Nutraceutical Research Stream at the Food & Mood Centre*

Chair: Jane Chang, M.D., Ph.D.

*Director, Child and Adolescent Psychiatry Division, Department of Psychiatry, China Medical University
(CMU) Hospital, Taiwan*

Assistant Professor, College of Medicine, China Medical University, Taiwan

Director of Taiwanese Society for Nutritional Psychiatry Research

Session Summary:

Great effort and resources have been invested in search for the aetiology and development of novel treatment for psychiatric disorders. Literature has shown that the 'monoamine hypothesis' is insufficient to provide a satisfactory solution. Moreover, due to the complexity of clinical manifestations and bio-psycho-social aetiology of psychiatric disorders, each single treatment shows only limited effectiveness and effect size. Therefore, integrative approaches including dietary modification and nutraceutical prescription should be considered to help increase the treatment efficacy in psychiatric disorders. Dr. Annabel Muller-Stierlin from Ulm University, Germany will outline subjective implications of dietary intake and eating behaviours with serious mental illness. Subsequently, a range of nutritional interventions will be discussed in several psychiatric disorders. Dr. Jane Pei-Chen Chang from China Medical University, Taiwan will discuss about omega-3 PUFAs in children and adolescents, with a focus on ADHD, ASD and depression. Dr. Calogero Longhitano from James Cook University, Australia will address ketogenic diet in Bipolar Affective Disorder and Schizophrenia. Ms Angela Sherwin from University of Canterbury, New Zealand will speak about the HPAI (High Anxiety Pyrole Intervention) Trial, examining the role of zinc, vitamin B6 and Pyrole in Generalized Anxiety Disorder. In this session, we aim to address the role of different nutritional approaches in common psychiatric disorders, and provide the audience with a comprehensive overview of the current updates in nutritional psychiatry.

Time: 13:55-14:15

Subjective implications of dietary intake and eating behaviours for people with serious mental illness

Annabel S. Mueller-Stierlin, Ph.D.; Sebastian Cornet, M.Sc.; Anna Peisser; Selina Jaeckle, B.Sc.; Jutta Lehle, B.Sc.; Sabrina Moerkl, PhD, MD; and Scott B. Teasdale, PhD

1. *Research associate, Institute of Family Medicine, Ulm University*

2. *Research associate, Department of Psychiatry II, Ulm University*

Abstract: In the general adult population, the 12-month prevalence for mental illness is 27.5%. People living with severe mental illnesses often also suffer from somatic comorbidities, which are associated



with a reduced life expectancy of 10 to 20 years. One reason for this, and aside from side effects from medication, could be unfavourable lifestyle choices that the target population engages in.

As the opinions and experiences of people living with serious mental illness on dietary issues and related factors are unknown, we aimed to understand the role of nutrition and its determinants in a biopsychosocial approach. In total, 28 semi-structured interviews were conducted with people living with serious mental illness (SMI) in Australia, Germany and Austria and a generic thematic analysis approach was applied.

Positive as well as negative implications of diet have been identified. A key issue for most of the participants was the mental burden arising from their body weight, explaining negative implications of diet, such as guilt and stigma. Several biological, psychological, and social factors have been identified that shape food choices and dietary behaviour.

Participants expressed a desire for more support to find adequate balance and to escape the vicious circle in terms of diet and mental health.

Time: 14:15-14:35

Omega-3 PUFAs in Children and Adolescents: Focus on ADHD, ASD, and Depression.

Jane Chang, M.D., Ph.D.

Director, Child and Adolescent Psychiatry Division, Department of Psychiatry, China Medical University (CMU) Hospital, Taiwan

Assistant Professor, College of Medicine, China Medical University, Taiwan

Director of Taiwanese Society for Nutritional Psychiatry Research

Abstract: Omega-3 polyunsaturated fatty acids (or omega-3 PUFAs, n-3 PUFAs) are essential nutrients throughout the life span. Recent studies have shown the importance of n-3 PUFAs supplementation during prenatal and perinatal period as a potential protective factor of neurodevelopmental disorders. N-3 PUFAs have been reported to be lower in youth with attention deficit hyperactivity disorder (ADHD), autism spectrum disorder (ASD) and major depressive disorder (MDD). N-3 PUFAs supplementation has shown potential effects in the improvement of clinical symptoms in youth with ADHD, ASD, and MDD, especially those with high inflammation or a low baseline n-3 index. This talk will further discuss about the potential clinical applications and evidence-based treatment guideline of n-3 PUFAS in children and adolescents, with a focus on ADHD, ASD, and Depression.

Time: 14:35-14:55

HAPI Trial – High Anxiety Pyrrole Intervention

Angela Sherwin, BSc Hons

PhD Student, Research Coordinator

Abstract: Anxiety is a worldwide issue for millions of people. Although pharmacological interventions are available, they do not work for everyone and side effects can be deleterious. The HAPI Trial is a PhD

study investigating biological mechanisms that may be implicated in anxiety. The study is looking at the efficacy of high-dose zinc and vitamin B6 as a treatment for symptoms of anxiety in those who meet clinical cut off for anxiety on the GAD-7, and includes an investigation into a urinary pyrrole that has been looked at since the late 1950s as a potential biomarker for mental health disorders. Participants will be randomised to receive treatment or placebo for 6 weeks in RCT before entering Open Label for further 6 weeks. Urine samples will be collected at baseline, end of RCT and end of OL for analysis. Change over time will be calculated and examined to see if there are any correlations between level of anxiety, as measured by various psychometrics, and concentration of the urinary pyrrole, kryptopyrrole. Kryptopyrrole will also be investigated to see if/how it might denude the body of zinc and B6, two micronutrients that are known to be associated with the production of GABA, and, therefore, implicated in anxiety. The study is currently recruiting participants.

Time: 14:55-15:15

Rationale for the use of Ketogenic diet and in Bipolar Affective Disorder and Schizophrenia: the current clinical evidence and a proposed RCT.

Calogero Longhitano, M.D. FRANZCP MRCPsych

Associate Professor of Psychiatry, James Cook University, Townsville, QLD, Australia

Consultant Forensic Psychiatrist, Mental Health Service Group, Townsville University Hospital, Australia

Abstract: Nutritional interventions in psychiatry have a long but lacklustre history. More recent advances have indicated that a whole diet approach may exert powerful effects on the metabolic health of brain cells via a number of potential processes that include enhanced bioenergetic functions, modulation of the gut microbiome, stabilisation of insulin signalling pathways and improved mitochondrial health. The author will present the results of a Systematic Review in Nutritional Interventions in psychotic disorders demonstrating promising small scale trial results in whole diet interventions, particularly with the ketogenic diet. A proposed clinical trial design of ketogenic diet vs Australian Healthy Eating Diet will be presented (n=100). The study is currently awaiting Human Ethics Research Approval at Townsville Hospital in Queensland, Australia, for an expected start date of March 2023.

Time: 15:15-15:35

Disturbed sleep and circadian rhythm in mice with vitamin D deficiency

Jiseung Kang, Jieun Jung, Tae Kim

Department of Biomedical Sciences and Engineering, Gwangju Institute of Science and Technology, Gwangju, South Korea

Abstract: Background: Vitamin D deficiency (VDD), prevalent worldwide, is associated with an increased risk of developing diseases and some cancers. VDD has also been linked to sleep disturbances, such as reduced sleep duration and lower sleep quality, but the underlying mechanism



is not yet understood. Vitamin D receptor (VDR) is highly expressed in several subcortical nuclei, including, but not limited to, the bed nucleus of the stria terminalis (BNST), thalamic reticular nucleus (TRN), dorsal raphe nucleus (DRN), and central nucleus of the amygdala (CeA). Interestingly, these nuclei are also essential in controlling sleep-wake behavior. It is plausible that vitamin D may play a role in sleep-wake control, given that VDR is abundant in sleep-related brain regions; however, there is no biological evidence to support this theory. Therefore, we hypothesized that vitamin D might play an essential role in controlling sleep-wake behavior and circadian rhythmicity and sought to elucidate its neurobiological mechanism.

Methods: We investigated sleep-wake behavior and circadian characteristics before and after the VDD induced by providing chows lacking vitamin D for six weeks. At eight weeks, C57BL/6J male mice have implanted with the electrodes to record electroencephalography and electromyography. After recovery, the vigilance states were recorded for 36 hours, including 24-hour baseline, 6-hour sleep deprivation, and 6-hour recovery sleep. For investigating circadian rhythm, data of the wheel-running activity were collected for one week in a 12:12 hour light-dark cycle followed by two weeks in the constant dark state.

Results: Our preliminary data showed total sleep duration decreased in mice with VDD, the homeostatic sleep response to sleep deprivation was attenuated, and sleep bouts were more fragmented. In addition, circadian rhythm analysis showed similar actogram patterns in normal and VDD conditions, but the intensity of wheel running activity decreased.

Conclusion: We found that VDD might cause disturbances in regulating sleep, wakefulness, and circadian rhythmicity. To our best knowledge, this is the first study to investigate sleep-wake behavior and circadian rhythmicity in an animal model of VDD. Further research is warranted to elucidate the neurobiological link between vitamin D and sleep-controlling nuclei.

S23. Effects of Ketogenic Diet Therapy Session

From Mice to Men, from Migraines to Psychosis. How ketosis hacks the brain's bioenergetic metabolism to restore healthy neural function.

Time: 16:10-17:10

Venue: Conference Hall, 2F, China Medical University (Shuinan Campus), Taichung

Moderator: Mrs. Lucy Ho, Dr. Jane Chang, M.D., Ph.D.

Chair: Calogero Longhitano M.D.

Associate Professor of Psychiatry, James Cook University, Townsville, QLD, Australia

Consultant Forensic Psychiatrist, Mental Health Service Group, Townsville University Hospital, Australia

Abstract: Deficits in brain energy metabolism, oxidative stress and inflammatory processes play a demonstrably important, and as yet neglected, role in the pathophysiology of several neurological and psychiatric disorders to include migraines, bipolar affective disorder and schizophrenia. Abnormal glutamate neurotransmission, GABA hypofunction and severe disturbances of glucose metabolism are among the bioenergetic processes that most strongly correlate with the pathophysiology of such disorders. Recent studies revealed that KD decreases brain glutamate, increases GABA levels and provides alternative

energy substrates through ketone bodies and the β -oxidation of fatty acids, thus allowing neurons to bypass glycolysis as the preferred energy substrate. This substantial preclinical evidence is now being translated across the globe by experienced clinicians who are applying the ketogenic diet on a growing array of clinical presentations.

This seminar summarizes the preclinical evidence obtained from mice models before discussing the putative biological mechanisms that underly the clinical translation of such findings via mitochondrial health and improved neural signaling. Clinical applications and results are then presented in turn by our panel of experienced clinicians: A Harvard psychiatrist who has applied KD in patients with psychosis and observed significant improvement of symptoms in addition to the reversal of metabolic disorder in his patients; a German-Swiss neuroscientist who calls herself a former migraineur and who now leads a national program of KD therapy for migraines; finally, an Australian-based psychiatrist who is setting up a randomized controlled trial of KD in psychosis will present his group's project and findings to date.

Time: 16:10-16:30

A review of dietary interventions in severe mental disorders and a proposed Ransomed Clinical Trial of Ketogenic Diet in psychosis.

Calogero Longhitano, M.D. FRANZCP MRCPsych

Associate Professor of Psychiatry, James Cook University, Townsville, QLD, Australia

Consultant Forensic Psychiatrist, Mental Health Service Group, Townsville University Hospital, Australia

Abstract: Results of a systematic review of nutritional interventions in psychosis are presented, demonstrating promising effects of Omega 3, Omega 6 fatty acid use and ketogenic diet.

The author will build on earlier preclinical data indicating the effect of ketogenic brain signalling, neuronal mitochondrial bioenergetic health, insulin resistance in enhancing neuronal function.

A randomised control trial of ketogenic diet vs healthy diet project is outlined, together with the rationale for use of a low carb, high fat diet in severe mental disorders. The author will present the results of a Systematic Review in Nutritional Interventions in psychotic disorders demonstrating promising small scale trial results in whole diet interventions, particularly with the ketogenic diet. A proposed clinical trial design of ketogenic diet vs Australian Healthy Eating Diet will be presented (n=100). The study is currently awaiting Human Ethics Research Approval at Townsville Hospital in Queensland, Australia, for an expected start date of March 2023.



Time: 16:30-16:47

From Mice to Men. Effects of ketogenic diet on behavioural models of psychiatry and why the effect might be translatable to humans.

Zoltan Sarnyai, M.D., Ph.D.

Associate Professor and Head, Laboratory of Psychiatric Neuroscience, James Cook University, Townsville, QLD, Australia.

Abstract: Deficits of brain energy metabolism are established by recent literature as significant contributors to a range of neurological, neuropsychiatric and neurodegenerative disorders and suggest dietary intervention as an encompassing field of therapeutics.

Ketogenic diet and add-on triglyceride treatment delivered to behavioural models of schizophrenia produced significant effects on brain energy metabolism, alleviating ATP and mitochondrial deficits. The author will discuss the broader implications on social or cognitive behaviour seen in mice and how this may be translated via bioenergetic processes onto human conditions such as schizophrenia, bipolar affective disorder and autistic spectrum disorders.

Time: 16:47-17:05

The Clinical Use of the Ketogenic Diet in Neurology and Psychiatry

Christopher Palmer, M.D.

*Director, Department of Postgraduate and Continuing Education, McLean Hospital, USA
Assistant Professor of Psychiatry, Harvard Medical School, USA*

Abstract: The ketogenic diet was developed approximately 100 years ago as a treatment for epilepsy and is now recognized as an evidence-based treatment for drug-resistant epilepsy. Numerous mechanisms of action have been identified, including changes in neurotransmitter activity, calcium channel regulation, insulin signaling, inflammation, and the gut microbiome. Given that epilepsy treatments are commonly used in the treatment of many psychiatric disorders, interest in the ketogenic diet as a treatment for serious mental illness is growing. Many case studies and pilot trials have been published suggesting efficacy and larger clinical trials are now underway.

This presentation will review the evidence for the use of the ketogenic diet in epilepsy, Alzheimers disease, schizophrenia, bipolar disorder, and alcohol use disorder.

Closing Remark & Award Ceremony

Time: 17:10-17:30

Venue: Conference Hall, 2F, China Medical University (Shuinan Campus), Taichung

Closing Remark by Symposium Chairman

Prof. Kuan-Pin Su, M.D., Ph.D.

Professor & Director, Mind-Body Interface Laboratory, CMU Hospital, Taiwan

Founding President, Taiwanese Society for Nutritional Psychiatry

Deputy Superintendent of An-Nan Hospital, China Medical University, Taiwan

Award Ceremony by Scientific Committee Chairman

Dr. Jane Chang, M.D., Ph.D.

Director, Child and Adolescent Psychiatry Division, Department of Psychiatry, China Medical University (CMU) Hospital, Taiwan

Assistant Professor, College of Medicine, China Medical University, Taiwan

Director of Taiwanese Society for Nutritional Psychiatry Research



Poster Blitz Award & Best Poster Award

Presented by: Dr. Jane Chang, M.D., Ph.D.

-
- 5PB001 Associations between adverse childhood experiences and health outcomes in medical students
Chia-Yu Chen, **Taiwan**
-
- PP002 The effects of Pilates on pressure and sleep quality of healthcare workers
Fei-Yu Su, **Taiwan**
-
- PP013 The Effects of Music Type on Reduction of Depressive Symptoms in Music Therapy: A Systematic Review and Meta-analysis of Randomized Controlled Trials
Ying-Che Huang, **Taiwan**
-
- PP014 Prostaglandins and their receptors in the niacin flush pathway as potential biomarkers for schizophrenia
Chi-Wei Chiu, **Taiwan**
-
- PP017 Early Palliative Care on Psychological Distress in Advanced Cancer Patients: A Meta-Analysis of Randomized Control Trials
Ikbal Andrian Malau, **Taiwan**

E-Poster Presentations

OP002	The role of transient receptor potential vanilloid 1 in the hypothalamus of mice in electroacupuncture relieve chronic pain. Doan Thi Ngoc Anh, Vietnam
PP011	Using imaging genetics approach to development of potential biomarkers for psychological resilience Yu-En Kang, Taiwan
PP020	Applying Machine Learning to Predict ε3ε4 Gene based on Wayfinding of Sea Hero Quest Game and ACE Cognitive Exam Yu-Hsiang Lee, Taiwan
5PB003	Sex Differences in the Relative Risk (RR) of Death of the Attention Deficit Hyperactivity Disorder (ADHD) Patients Kai-Jie Yang, Taiwan
5PB005	States of quiescence: Non-pharmacological management of depression and chronic pain from an ethnomedical perspective Kay Ling Ang, Singapore
OP020	Aberrant Gamma-Band Oscillations and Prepulse Inhibition in Mice with Vitamin D Deficiency Tae Kim, South Korea
PP008	Sexual behavior change in Taiwan public during the COVID-19 pandemic Evelyn Tseng, Taiwan
PP018	“Cyclotherapy” for Anxiety Disorder: A Meta-analysis of Randomized Controlled Trial Yi-Hua Wang, Taiwan
PP001	The Effect of Music Distraction on Dental Anxiety: A Meta-analysis Wei-Ti Hsu, Taiwan
PP010	A Role of Astrocytic Glutamate Regulation in Interferon-α-Induced Depression: Supporting Evidence from Genetic Association Studies Szu-Wei Cheng, Taiwan
PP016	Patients with Anxiety Disorders Prescribed with Benzodiazepine Are at Higher Risk of Depression Ching-Fang Sun, USA
PP021	Anti-inflammatory effect of Traditional Chinese Medicine in Depression—a systemic review and meta-analysis Sheng-Ta Tsai, Taiwan
PP006	Influence of Nutritional Status on Patients with Stroke Receiving Post-Acute Care Wen-Chih Lin, Taiwan



PP015	Small extracellular vesicle microRNAs as epigenetic regulators in the development of psychological resilience Bao-Yu Chen, Taiwan
OP006	The Role of Omega-3 Polyunsaturated Fatty Acids in Chronic Obstructive Pulmonary Disease (COPD) Comorbid Mood Disorders Halliru Zailani, Taiwan
PP007	Applying the competence of community psychiatric mental health nursing to continuous care for a patient suffering from schizophrenia Wan-Ru Huang, Taiwan
PP019	Real-world Practice of Repetitive transcranial magnetic stimulation (rTMS) Efficacy in Patients with Major Depressive Disorder Chia-Chun Yang, Taiwan
OP005	Contribution of National Homegrown School Feeding Program to the Recommended Nutrient Intakes of School-aged Children in Zaria-Nigeria. Halliru Zailani, Taiwan
OP018	Disturbed sleep and circadian rhythm in mice with vitamin D deficiency Tae Kim, South Korea
PP022	Comparison of mood and cognitive disorders induced by acute and chronic sleep deprivation in mice Nasar Ullah Khan Niazi, China
5PB002	Psychiatric Services in Patients with Bipolar Disorder with and without Traditional Chinese Medicine Intervention: A population-based study in Taiwan Shu-Ping Chen, Taiwan



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Thank you for your participation in the 12th Mind-Body Interface International Symposium. In order to help us improve, we want to hear back from you. Please fill in the Feedback Survey by scanning the QR code below, and stay in touch with us on Facebook or Twitter for updates & photos.

第十二屆身心介面國際研討會的與會者，您好：
感謝您參與本次研討會，希望活動內容與安排能讓您有豐富的收穫。為使下一次活動更臻完美，請您依本次活動感受提供寶貴建議，作為日後舉辦活動之參考。邀請您協助掃描下方二維條碼填寫【會後意見調查表】，以作為我們往後改進的參考，更歡迎您關注我們的臉書，明年見！



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成人局部癱瘓的輔助治療、
纖維肌痛(fibromyalgia)、
脊髓損傷所引起的神經性疼痛

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- 【成分含量與劑型】** 膠囊劑，每膠囊含有 75 毫克的 pregabalin。
【用法與用量】 口服使用
- 【適應症】** 糖尿病周邊神經病變所引起的神經性疼痛、帶狀疱疹後神經痛、成人局部癱瘓的輔助治療、纖維肌痛(fibromyalgia)、脊髓損傷所引起的神經性疼痛。
- 【禁忌】** 已知對 pregabalin 或本品其他任何成分過敏的病人。曾有使用 pregabalin 的病人發生血管性水腫與過敏的現象。
- 【警語及注意事項】** 血管性水腫：上市後曾有病人在 LYRICA 治療初期與長期治療期間發生血管性水腫的報告。過敏：有病人開始使用 LYRICA 治療後不久便發生過敏的上市後報告。「自發行為與自發嚴重：抗癲癇藥物 (AEDs)」包括 LYRICA，會升高使用此類藥物治療任何適應症之病人出現自殺念頭或自殺行為的風險。「呼吸抑制：從病例報告、人體試驗和動物研究所得證據顯示，LYRICA 與中樞神經系統 (CNS) 抑制劑 (包括鴉片類藥物) 同時給藥，或有潛在呼吸障礙的背景情況下，會導致嚴重、危及生命或致死性的呼吸抑制。」「嚴重和增進：LYRICA 可能會引起頭暈與嗜睡。」「突然戒除：快速停藥導致不良反應風險增加：與所有抗癲癇藥物 (AED) 相同，逐漸停用 LYRICA 以降低癲癇病人癲癇發作頻率增加的可能性。」「高滲水腫：LYRICA 治療可能會引起高滲水腫。」「體重增加：LYRICA 治療會使體重增加。」「致腫瘤可能性：在 LYRICA 標準臨床前活體內全身致瘤性研究中，在兩個不同品種的小鼠發現到血管肉瘤的發生率增高。」「對取精的影響：在對男性試劑中，接受 LYRICA 治療的男性，遺精力變化的比例 (7%) 比安慰劑組高 (2%) 高。這些症狀在大部份病例隨著繼續給藥而消失。」「肌酸酐升高：LYRICA 治療會伴隨肌酸酐 (creatinine kinase) 升高。」「血小板計數減少：LYRICA 治療會伴隨血小板計數減少。」「PRN 期間延長：LYRICA 治療會伴隨 PR 間期延長。
- 【不良反應】** 在結合所有病人群的上市前對照性試驗中 (包括 OPN、PHN 以及合併局部癱瘓的成人病人)，接受 LYRICA 治療者比接受安慰劑治療者較常通報頭暈、嗜睡、口乾、水腫、視力模糊、體重增加及「思考異常」(主要系專注力/注意力困難) 等不良反應 (大於或等於 5% 且是在安慰劑組出現比率的 2 倍)。
- 【常見不良反應】** 全身：常見：腹痛、過敏反應、發燒、消化系統：常見：胃腸炎、食慾增加、血液與淋巴系統：常見：瘀斑、肌肉骨骼系統：常見：關節痛、關節炎、肌肉、肌無力、神經系統：常見：焦慮、人格解體、肌張力過強、知覺減退、性慾減退、眼球震盪、感覺異常、頭暈、昏迷、抽搐、皮膚與附屬構造：常見：瘙癢、特殊感官：常見：眩暈、視感、中耳炎、耳鳴、生殖泌尿系統：常見：性冷淡、陽痿、頻尿、尿失禁

備註：*此為處方資訊摘要，完整處方資訊請詳閱仿單。 Reference: 1. Roith T, van Seventer R, Murphy TK. Curr Med Res Opin. 2010;26(10):2411-2419.

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【適應症】成人鬱症。

【用法·用量】

一般建議每天一顆 Valdoxan[®] 25mg 於睡前口服使用。治療兩週後，若症狀沒有改善時，劑量可增加至每天50mg，也就是 Valdoxan[®] 25mg 兩顆，於睡前一次服用。於憂鬱症老年患者(<75歲)，agomelatine(每天25至50mg)的療效與安全性已經確立。

【禁忌】

- 對有效成分或任一賦形劑過敏者
- 肝功能不全者，特別是針對肝硬化或活動性肝臟疾病，或肝轉胺酶指數 \geq 3倍正常值上限者
- 併用CYP1A2強抑制劑者(如fluvoxamine、ciprofloxacin)

【不良反應】

最常見的不良反應是噁心和暈眩，不良反應通常是輕度或中度，並且在開始治療後前兩週內發生。這些不良反應通常是短暫的，而且一般不會導致停止治療。

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[用法用量]

- INVEGA TRINZA® 應每3個月注射一次。
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- INVEGA TRINZA® 僅供肌肉注射使用，切勿透過任何其他途徑給藥。

[禁忌症]

INVEGA TRINZA® 禁用於已知對 paliperidone 或 risperidone 過敏，或是對 INVEGA TRINZA® 配方中之一賦形劑過敏的患者。

[特殊警告及注意事項]

INVEGA TRINZA® 並未被核准用於治療失智症相關精神病患者。會升高失智症精神病患者老年患者的死亡率。發生於失智症相關精神病患者老年患者的腦血管不良反應，包括中風。使用時應注意抗精神病藥物毒性症候群、QT 間期延長、遲發性運動異常、代謝改變(高血糖與糖尿病、血脂異常、體重增加)、直立性低血壓與暈厥、跌倒、白血球減少症、嗜中性白血球減少症、以及顆粒性白血球缺乏症、高泌乳素血症、發生認知與運動功能障礙的可能性、癲癇發作、吞嚥困難、陰莖異常勃起、干擾體溫調節。

[副作用]

常見：注射部位反應、體重增加、頭痛、上呼吸道感染、靜坐不能、以及柏金森氏症。

[使用前請詳閱說明書投藥須知、特殊族群的劑量、管轄及注意事項、不良反應]

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Reference:

1. Lambert M, Sanchez P, Bergmans P, et al. Effect of paliperidone palmitate 3-month formulation on goal attainment and disability after 52 weeks' treatment in patients with clinically stable schizophrenia. *Neuropsychiatr Dis Treat.* 2020;16:3197-3208.

全新成分

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藥理作用

Brexpiprazole可能是藉由血清素5-HT_{1A}與多巴胺D₂受體之部分致效作用以及血清素5-HT_{2A}受體之拮抗作用的合併作用而產生療效。

使用禁忌

已知對brexpiprazole或其任一成分過敏的病人，禁用REXULTI。

不良反應

靜坐不能、體重增加、腹瀉、消化不良等。

疾病分類代碼

ICD10: F20

健保代碼

1mg: BC27365100, 2mg: BC27366100, 4mg: BC27368100



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PNIRSA Asia-Pacific Symposium

• 主辦單位 (Organizer) :

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Taiwanese Society for Nutritional Psychiatry Research 台灣營養精神醫學研究學會

2022