The Chinese University of Hong Kong Department of Psychiatry Schedule for June, 2025

<u>Date</u> Jun5	<u>Time</u> 14:30-15:30	<u>Activity</u> Research Seminar * Neural correlates of decisional impulsivity across early stages of a-synucleinopathy: a case-control functional magnetic resonance imaging study			'y	<u>Speaker(s)</u> Ms. Nicole GONG Supervisor: Prof. YK WING Co-supervisors: Dr. Joanne HUANG, Dr. Steven CHAU, Dr. Yaping LIU		
	15:30-16:30	Research Serr Gut microbiota Rapid Eye Mon subtype of depre	ninar * in major depressin vement Behavior I ssion with underly	ve disorders with Disorder: tracing a ing neurodegenerati	ion	Ms. Ray Supervise Co-super HUANC	YANG or: Prof. YK WING rvisors: Dr. Joanne G, Dr. Yaping LIU	
		Registration: https://bit.ly/4mrlK6q						
Jun12	14:30-16:00	Psychotherapy Case Conference (MUL)# Family therapy in mental health setting - case illustration				Dr. Irene KAM Dr. Bart WONG		
	16:00-17:00	Psychotherapy Supervision (MUL)#						
Jun19	14:30-16:30	Quality Assurance Meeting (SH)# / (TPH)#						
	16:30-17:30	Medical Staff Forum (MUL)# Basic psychodynamic theories - a case illustration				Dr. Kenneth WONG Dr. Gabe CHAN		
Jun26	13:00-14:00	Academic Lecture (SH) (MUL)* Update of CANMAT guidelines on management of inadequate treatment response in Major Depressive Disorder				Prof. Roger MCINTYRE Professor of Psychiatry and Pharmacology University of Toronto		
		Registration: <u>https://bit.ly/3Fj9EeP</u>						
	14:30-16:00	Academic Lecture (MUL)* Disease burden, economic costs, and caregiver challenges of dementia in Asian contexts				Dr. Bob HUO Research Assistant Professor Department of Psychiatry Faculty of Medicine		
		Registration: <u>https://bit.ly/3H22hcd</u>				The Chinese University of Hong Kong		
Venue:	*Live video #Closed meeting	@Non-CME Event	MUL Seminar Room, Multi-centre, Tai Po Hospital, Tai Po, N.T.	TPH Conference Room 1 G/F, Wing D Tai Po Hospital Tai Po, N.T.	SH Dining R Ward 7A Dept. of 7/F, Shat	oom B Psychiatry tin Hospital	1AL Rm. 1005, Dining Room Ward 1AL, 1/F Tai Po Hospital Tai Po, N.T.	

Please contact 2607-6025 two days before hand to arrange presentation equipment.

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Research Seminar

Date: 5 JUN 2025 (THU) Time: 14:30-15:30 Venue: Zoom

Register Now



Ms. Nicole GONG

Supervisor: Prof. YK WING Co-supervisor: Dr. Joanne HUANG, Dr. Steven CHAU, Dr. Yaping LIU

Topic: Neural correlates of decisional impulsivity across early stages of a-synucleinopathy: a case-control functional magnetic resonance imaging study

Abstract:

Introduction: Idiopathic rapid eye movement sleep behavior disorder (iRBD) is the strongest prodromal markers of asynucleinopathy, including Parkinson's disease (PD), dementia with Lewy bodies, and multiple system atrophy. PD patients demonstrated altered impulsivity, usually linked to dopaminergic agonists. Our previous study observed a complex construct of altered impulsivity in iRBD and early PD patients, manifested as decreased risk taking and increased reflection impulsivity. While corticostriatal circuits have been implicated in decisional impulsivity in healthy individuals, their precise role underlying decisional impulsivity across early α-synucleinopathy remains unclear. This study aims to investigate the neural correlates associated with the altered decisional impulsivity in early asynucleinopathy.

Materials and methods: This was a case-control study conducted among controls, iRBD, and PD patients. Early PD patients were diagnosed with United Kingdom PD Brain Bank criteria with motor symptoms onset within five years. Participants underwent clinical assessments and 3T MRI scanning, including structural, resting-state, and task-based fMRI. Decisional impulsivity was measured using the Balloon Analogue Risk Task (BART) for risk taking and beads task for reflection impulsivity. Regions of interest (ROIs) were selected along corticostriatal circuits. Seed-based functional connectivity (FC) was computed with subcortical ROIs serving as seeds.

Results: A total of 97 patients, including 25 controls (mean age = 67.7, male 57.7%), 40 iRBD patients (mean age = 70.6, male 72.5%), and 32 PD patients (mean age = 69.7, male 89.7%) were recruited. PD and iRBD patients exhibited elevated reflection impulsivity compared to controls, as evidenced by fewer extracted beads (PD vs. iRBD vs. controls: 3.6 ± 2.4 vs. 3.7 ± 2.1 vs. 4.9 ± 2.6, P = 0.03). Meanwhile, risk taking level on the BART was comparable among groups. fMRI analyses revealed augmented neural activities in both ventral and dorsal striatum in iRBD patients during risky decision-making in the BART. Regarding the reflection impulsivity, PD and iRBD patients exhibited enhanced BOLD activations in mPFC during "beads-drawing" phase compared to controls, whereas iRBD patients showed additional involvement of right ACC/OFC and left parietal lobe during the same phase (P _{FWE} < 0.05, TFCE). Further ROI analyses corroborated the findings and additionally revealed increased engagement in bilateral ventral striatum (VS) in PD patients (PD vs. control: right NAc: 0.07 [-0.41,0.70] vs. -0.59 [-1.55,-0.26], P = 0.002; left NAc: 0.35 [-0.21,1.16] vs. -1.13 [-2.06,0.05], P = 0.03), whereas enhanced activation in right VS in iRBD patients (iRBD vs. controls: -0.06 [-0.66,0.44] vs. -0.59 [-1.55,-0.26], P = 0.002). Seed-based FC analyses revealed attenuated connectivity in PD patients between right NAc and multiple regions including the bilateral frontal lobes, striatum, thalamus, parietal lobes, and cerebellum. Additionally, iRBD patients displayed decreased pallidum-putamen and pallidum-OFC connectivity (P _{FWE} < 0.05).

Conclusions: Alterations of decisional impulsivity, especially the reflection impulsivity, have already occurred in early a-synucleinopathies. Neuroimaging analyses revealed both the disrupted connectivity which potentially impaired reward networks and the recruitment of corticostriatal circuits contributing to decisional impulsivity deficits. Notably, altered decisional impulsivity in iRBD might reflect compensatory mechanisms following striatal dopamine neurons denervation, suggesting its potential utility as a phenoconversion marker.

Acknowledgements: This study was supported by the Health and Medical Research Fund of Hong Kong (No. 08191416).

Registration is required. For enquiries, please contact pci-event-app@cuhk.edu.hk or 26076025. Please display the registration name for joining the Zoom lecture.







Research Seminar

Date: 5 JUN 2025 (THU) Time: 15:30 - 16:30 Venue: Zoom

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Ms. Ray YANG Supervisor: Prof. YK WING Co-supervisors: Dr. Joanne HUANG, Dr. Yaping LIU

Topic: Gut microbiota in major depressive disorders with Rapid Eye Movement Behavior Disorder: tracing a subtype of depression with underlying neurodegeneration

Abstract:

Background: REM sleep behavior disorder (RBD) is a parasomnia associated with α-synucleinopathy. RBD features are more common in major depressive disorder (MDD). While initially postulated as an antidepressant-induced phenomenon, emerging evidence suggests that MDD comorbid with RBD (MDD+RBD) represents underlying neurodegeneration. The gut-brain axis is increasingly recognized in both depression and neurodegeneration, with PD-like gut dysbiosis observed in idiopathic RBD (iRBD). This study aims to characterize the gut microbiome in MDD+RBD to explore its potential as a distinct depressive subtype with neurodegenerative features for further etiological understanding and intervention.

Methods: This case-control study included four groups: patients with MDD+RBD, age- and sex-matched MDD without RBD (MDD-only), healthy control (HC), and iRBD without a psychiatric disease. RBD diagnosis was confirmed by video-polysomnography. MDD+RBD was defined as MDD onset preceding the appearance of RBD. Fecal samples were analyzed using metagenomic sequencing.

Results: A total of 420 participants were included: 124 HC, 80 MDD-only, 82 MDD+RBD and 134 iRBD. The mean

age and sex distribution were comparable among HC (65.7 ± 7.0 years, 61.3% male), MDD-only (65.6 ± 6.5 years, 50.0% male), and MDD+RBD (66.3 ± 5.6 years, 62.2% male). However, iRBD group was slightly older (67.9 ± 6.1 years) and had a higher proportion of males (78.4%) compared to the HC group.

- Psychiatric and gastrointestinal features: The psychiatric profiles of MDD-only and MDD+RBD were largely comparable. Regarding gastrointestinal features, lower Bristol stool scale scores (BSS, harder stool) were observed in iRBD and MDD+RBD, compared to MDD-only and HC (3.3 ± 1.2 vs 3.2 ± 1.5 vs 4.2 ± 1.3 vs 4.1 ± 1.1, q < 0.001).
- Neurodegenerative biomarkers: The total likelihood ratio for prodromal PD (excluding RBD) was higher in MDD+RBD than iRBD, MDD-only and HC (1.78 ± 1.11 vs 1.38 ± 0.97 vs 0.74 ± 0.70 vs 0.44 ± 0.55, p-value < 0.001).
- **Microbial profiles:** After adjusting for age, sex and BSS, MDD+RBD exhibited a distinct microbial composition compared to both HC (R² = 0.012, q-value = 0.003) and MDD-only (R² = 0.011, q-value = 0.013), while its microbiota composition was similar to that of iRBD (R² = 0.0052, q-value = 0.26). In contrast, MDD-only was similar to HC in terms of microbial clustering. Taxonomic analysis, adjusting for age, sex and BSS, revealed that MDD+RBD displayed a gut dysbiosis with both PD-associated species (e.g., enriched Akkermansia muciniphila, Ruthenibacterium lactatiformans, and depleted SCFA-producer Faecalibacterium prausnitzii) and depression-related (e.g., enriched Eggerthella lenta and decreased Coprococcus eutactus) alterations. Random Forest model showed that microbial species and GI features could effectively differentiate MDD+RBD from MDD-only (AUC = 0.78).

Conclusions: MDD+RBD exhibited a gut dysbiosis similar to that of iRBD, whereas MDD-only subjects resembled more closely to HC, suggesting that MDD+RBD is likely a variant of depression with underlying neurodegeneration. In addition, the gut microbiome might serve as a promising biomarker for early neurodegenerative risk stratification in psychiatric populations. Our findings offer novel insights into microbiota-gut-brain axis, highlighting its role in the intersection of depression and neurodegeneration.



Registration is required. For enquiries, please contact pci-event-app@cuhk.edu.hk or 26076025. Please display the registration name for joining the Zoom lecture.

ACADEMIC LECTURE





Faculty of Medicine

Prof. Roger MCINTYRE

Professor of Psychiatry and Pharmacology University of Toronto

26 June 2025 (Thu)



13:00 - 14:00

Seminar Room, Multicentre, Tai Po Hospital & Zoom





Topic: Update of CANMAT guidelines on management of inadequate treatment response in Major Depressive Disorder



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Abstract:

This presentation examines the latest updates to the CANMAT guidelines for managing major depressive disorder (MDD), particularly focusing on inadequate treatment responses. The guidelines underscore the advantages of dose-dependent antidepressants, which enhance efficacy while minimizing side effects. By optimizing dosages based on individual patient characteristics, clinicians can improve response rates in those with MDD. The updated recommendations advocate for a strategic approach that combines pharmacotherapy with psychotherapy and lifestyle interventions. This comprehensive management plan aims to address treatment-resistant cases effectively, facilitating better outcomes and improving the quality of life for patients suffering from MDD.

CME ACCREDITATION: PENDING

*Lunch box will be provided

Supported by: LUNDBECK





ACADEMIC LECTURE



Dr. Bob HUO

Research Assistant Professor Department of Psychiatry Faculty of Medicine The Chinese University of Hong Kong

💼 26 JUN 2025 (THU)

<u>()</u>14:30 - 16:00

Seminar Room, Multicentre, Tai Po Hospital & Zoom

Topic: Disease burden, economic costs, and caregiver challenges of dementia in Asian contexts

Abstract:

Neurocognitive disorders (NCDs), including dementia, significantly impair cognitive function, daily living, and overall quality of life, while placing a considerable burden on families, healthcare systems, and society. As one of the fastest-ageing populations globally, Hong Kong is experiencing a sharp rise in the prevalence and societal impact of NCDs, particularly among the oldest-old. This presentation will explore the disease burden, economic implications, and caregiver challenges associated with dementia in Hong Kong, drawing on findings from the Hong Kong Mental Morbidity Survey – a population-based prevalence study. In the first section, the latest prevalence and economic costs of NCDs will be highlighted, noting that a significant proportion of cases remain undiagnosed and hidden within the community. The second section will focus on the caregiving burden and psychological distress experienced by family caregivers, and examine how positive caregiving experiences may serve as a protective factor. Throughout the presentation, we will contextualize Hong Kong's findings within the broader landscape of Asia, offering comparative insights and discussing potential clinical and policy strategies to address such growing challenges posed by NCDs.



<u>Biography:</u>

Dr. Bob Zhaohua Huo is a Research Assistant Professor in the Department of Psychiatry at The Chinese University of Hong Kong (CUHK). He earned his Ph.D. in Public Health from CUHK, building on a strong academic foundation in health economics developed during his studies at Fudan University. His interdisciplinary research focuses on dementia, mental health, health economics, and caregiver well-being. He applies epidemiological and economic methodologies to examine the disease burden, healthcare costs, and psychosocial impact of neurocognitive and mental disorders. His work also evaluates the clinical, economic, and social outcomes of both pharmacological and non-pharmacological interventions for individuals with neurocognitive disorders and their family caregivers, with the aim of informing evidence-based policy and integrated care strategies.

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