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The Chinese University of Hong Kong
Department of Psychiatry
Schedule for May, 2024

Date	Time	Activity	Speaker(s)
May2	14:30-16:00	Clinical Case Conference (MUL & SH) * *Refreshing ECT Proficiency: Practical Tips, Skills and Case Sharing* Registration: https://bit.ly/4aXMXaq	Prof. WK TANG, Dr. Andrea YU, Dr. Brian OR Moderator: Dr. Winki TAI
May9	14:30-16:00	Psychotherapy Case Conference (MUL) # *Understanding couple dynamics - case illustrations from family biofeedback assessment*	Dr. Irene KAM
	16:00-17:00	Psychotherapy Supervision (MUL) #	
May16	14:30-16:30	Quality Assurance Meeting (SH)#/(TPH)#	
May23	14:30-16:00	Academic Lecture (MUL)* *How can we be neuroscientific in psychiatry* Registration: https://bit.ly/4aZHpvT	Dr. Hei Ming LAI Assistant Professor Department of Chemical Pathology The Chinese University of Hong Kong
May30	14:30-15:30	Research Seminar * *Investigating the Impact of Home Confinement on Mental Health during the COVID-19 Pandemic Using Google Location History*	Mr. Owen Leung Supervisor: Prof. Linda LAM Co-supervisor: Dr. Arhtur MAK
	15:30-16:30	Research Seminar * *Alterations of Structural Complexity in Young Unmedicated Patients with Bipolar II and Unipolar Depression* Registration: https://bit.ly/49BecGw	Ms. Idy CHOU Supervisor: Dr. Hanna LU Co-supervisors: Prof. Linda LAM, Dr. Arthur MAK

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 Room, Ward 7AB, Dept. of Psychiatry, 7/F, Shatin Hospital, Shatin, N.T.

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.

http://www.psychiatry.cuhk.edu.hk

香港中文大學醫學院
Faculty of Medicine
The Chinese University of Hong Kong

ACADEMIC LECTURE

Dr. Hei Ming LAI

Assistant Professor
Department of Chemical Pathology
The Chinese University of Hong Kong

23 May 2024 (THU)
14:30 - 16:00
Seminar Room, Multicentre, TPH & Zoom

Topic: How can we be neuroscientific in psychiatry

Abstract:

We often think there is a far cry from bridging neuroscience and psychiatry. In this academic lecture, we will discuss how psychiatry and neuroscience have benefitted each other, and suggest perhaps we are not that far from closing the gap. Approaches that can provide unbiased investigation of psychopathology and thought experiments will be discussed. As a neurotechnologist, we will also examine what are the paths forward and the resources we need that can finally bring unification between the two.

Biography:

Dr Hei Ming Lai was a neuroscientist-psychiatrist, and an adjunct clinical assistant professor in the Department of Psychiatry, CUHK. He has spent the last decade developing and perfecting three-dimensional neuronal mapping methods across whole brains, established the first psychiatry laboratory in Hong Kong, and is now leading a multidisciplinary team in the development of novel biotechnologies that benefit fields beyond psychiatry.

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.

REGISTER NOW

Research Seminar

Date: 30 May 2024 (THU)

Time: 14:30 - 15:30

Venue: Zoom

Register Now

Mr. Owen LEUNG

Supervisor: Prof. Linda LAM

Co-supervisor: Dr. Arthur MAK

Topic: Investigating the Impact of Home Confinement on Mental Health during the COVID-19 Pandemic Using Google Location History

Abstract:

The COVID-19 pandemic brought about significant changes in everyday life, including the implementation of mobility limitations as a key strategy for disease prevention. The impact of confinement measures on mental health has been widely studied, with early research indicating an increase in depressive symptoms following the enforcement of these policies. However, accurately measuring the effects of confinement on mental health over time and across individuals has been challenging, as self-reporting methods may not capture variations in confinement levels effectively.

This study utilized Google Location History (GLH), an optional feature in the Google Maps smartphone application that records geolocation data passively and continuously. GLH data was collected from 149 participants in the CU-COVID19 study, a three-wave web-based panel study assessing mental health indicators (depression, anxiety, PTSD) at different stages of the pandemic. By analyzing GLH data, changes in various aspects of mobility restrictions, such as immobility, travel distance, frequency, and diversity, were continuously measured throughout the pandemic. Additionally, publicly available information provided by Google and Apple was used to estimate community-wide confinement levels. This analysis aimed to explore the interplay between population and individual confinement measures and their associations with mental health outcomes across the pandemic.

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Research Seminar

Date: 30 May 2024 (THU)

Time: 15:30 - 16:30

Venue: Zoom

Register Now

Ms. Idy CHOU
Supervisor: Dr. Hanna LU
Co-supervisors: Prof. Linda LAM, Dr. Arthur MAK

Topic: Alterations of Structural Complexity in Young Unmedicated Patients with Bipolar II and Unipolar Depression

Abstract:

Introduction: This study aimed to investigate multi-scale gray (GM) and white matter (WM) alterations in young, unmedicated individuals with bipolar II depression (BPII) and unipolar depression (UD) compared to healthy controls (HCs) using gray matter (GM) volume, cortical thickness, pial surface area, and local gyrification index measures, and diffusion tensor imaging (DTI) metrics.

Methods: The study included 27 individuals with BPII (mean age = 23.1), 27 individuals with UD (mean age = 24.0), and 27 HCs (mean age = 23.1). All patients were unmedicated and clinically depressed as assessed by the Montgomery-Åsberg Depression Rating Scale (MADRS). Structural complexity was decoded by morphometric features and structural connectivity. High-resolution structural magnetic resonance imaging (MRI) scans were acquired and was used for quantifying the morphometric features, including GM volume, cortical thickness, pial surface area, and local gyrification index (LGI). The Desikan-Killiany atlas was used for cortical parcellation for ROI-based analysis. Vertex-wise analysis was performed for LGI. DTI was analyzed using tract-based spatial statistics (TBSS) and probabilistic tractography.

Results: Our findings revealed distinct GM alterations in BPII and UD. Individuals with BPII had thinner cortex than HC in right parietal regions, while cortical thinning in UD was found in right anterior and posterior cingulate cortex. BPII also showed higher gyrification at the right middle temporal and precentral cortices compared to UD. While tract-based analysis did not reveal significant WM connectivity changes in both patient groups, probabilistic tractography showed widespread alterations in major WM tracts in patients.

Conclusions: Our study provides significant evidence of extensive gray-matter structural and white-matter connectivity alterations in BPII and UD across multi-scale measures. Importantly, distinct brain abnormality patterns were observed in bipolar II and unipolar depressed patients. The observed differences are in line with the current understanding of the pathophysiological underpinnings of BPII and UD, reflecting deficits in executive processes such as attention and working memory, interpretation of emotional expression, and the processing of reward and punishment information, which are central to emotion regulation. Alternatively, our findings may also suggest a compensatory mechanism in BPII, where brain activity related to emotional expression is elevated to compensate for disrupted executive functions such as attention and working memory during hypomanic episodes when social interactions increase.

Importantly, our findings in young, unmedicated adults with BPII and UD suggest that the observed structural and connectivity alterations are not solely attributable to medication effects, but occur early in the course of the illness. Indeed, cortical thinning is known to be associated with illness course and symptom burden, such as the number of hypomanic episodes. Moreover, disrupted structural connectivity has been shown to underpin emotional and cognitive impairments in bipolar and unipolar depression. Early intervention targeting the identified brain regions may hold promise in mitigating or preventing these pathological processes. This is particularly significant because existing research on high-risk cohorts typically does not show apparent gray and white matter changes. Future studies with larger sample sizes and collaborative efforts are warranted to confirm and extend our results.

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