

Singapore hosts inaugural symposium discovering 'Advances in Neurodevelopment and Mental Health'

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Bridging Minds 2026 by Duke-NUS discovered "Advances in Neurodevelopment and Mental Health" by convening leading researchers, clinicians, and scholars



The Bridging Minds 2026: Neurodevelopment and Mental Health workshop, held at Duke-NUS Medical School in Singapore on 30–31 March 2026, marked a landmark collaboration between *Duke-NUS*, *Boston Children's Hospital*, and *Harvard Medical School*.

The event brought together leading researchers, clinicians, and scholars to share insights, foster collaboration, and explore new frontiers in neurodevelopmental and mental health disorders. With a program featuring distinguished speakers, panel discussions, and opportunities to engage with cutting-edge research, the workshop provided a platform for advancing knowledge and innovation in these critical fields. Attendees were encouraged to connect with peers, exchange ideas, and build lasting professional networks beyond the formal sessions.

Professor Patrick Tan, Dean of Duke-NUS Medical School, inaugurated the 'Bridging Minds' event in collaboration with Harvard Medical School and Boston Children's Hospital, welcoming global attendees and highlighting the assembly of leading neuroscience researchers dedicated to advancing brain research and understanding diseases."

By uniting global expertise and enthusiasm, Bridging Minds underscored the importance of interdisciplinary approaches to address the complexities of mental health and neurodevelopment, inspiring productive dialogue and future collaboration.

The event featured a diverse lineup of local and global experts, including Professor Kenneth Mak as a special guest, to foster interdisciplinary collaboration and explore advances in neurodevelopment and mental health beyond Duke-NUS.

Professor Patrick Tan emphasized that Duke-NUS viewed mental health as a core pillar of medicine and a priority addressed through the Neuroscience and Behavioural Disorders Programme led by Hongyan. He highlighted the global scale of mental health disorders, affecting over one billion people, and noted their rise as a leading cause of disease burden, particularly among children and youth. Research at NBD focused on understanding neurodevelopment, disruptions caused by genetic, environmental, or social factors, and their lifelong consequences. Proff Tan also mentioned that conditions like autism, ADHD, schizophrenia, and mood disorders originate in early brain development, making early identification, intervention, and prevention key to improving patients' and families' experiences.

Evaluating the significance of the sessions, Proff Tan mentioned, "While we have made progress, major questions remain: How do molecular and cellular events affect the brain's circuitry? What other biological processes shape brain development? And critically, how do we translate the insights gleaned into preventive strategies and meaningful therapies?"

Neurohealth Frontiers: Advancing Neurodevelopment Insights

The event was well-structured with a mix of keynote speeches, focused sessions, panel discussions, and breaks to facilitate networking and reflection. Each day featured a balance of theoretical and practical insights, with chairs and moderators guiding discussions. The inclusion of diverse perspectives, from academic research to clinical applications, highlighted the event's aim to bridge gaps between basic science and real-world health solutions.

The two day event emphasized interdisciplinary approaches to **neurodevelopment and mental health, integrating genetics, genomics, imaging, and clinical studies**.

Day 1 centered on the **biological and molecular underpinnings of neurodevelopmental disorders**, while **Day 2** expanded into **mental health, emphasizing imaging, behavior interventions, and therapeutic innovations**. The presence of international and local experts underscored the collaborative nature of the event, with topics ranging from **RNA regulation** and **AI-driven** insights to practical clinical applications like early intervention for **anxiety** and **adaptive treatments for depression**.

Day 1: The inaugural session on the first day began with opening remarks by Prof Patrick Tan, followed by sessions focused on neurodevelopmental disorders and neural development. Two key sessions were: **'Genetics and Genomics of Neurodevelopmental Disorders,'** featuring talks on autism and converging mechanisms of these disorders, and **"Mechanisms of Neural Development I"** which covered topics like the molecular dynamics of the human neocortex and RNA biology in brain development. Further, the discussion continued with **'Mechanisms of Neural Development II'** discussing neuronal diversity, pruning, and lipid metabolism in neurodevelopment. The day concluded with **'Biological and Clinical Insights of Neurological Disorders,'** where speakers addressed brain health for children, RNA regulation in psychosis, and autism research at KKH, emphasizing collaborative translational efforts.

Day 2 : The second day sessions focused on mental health, beginning with **'Neurodevelopment in Mental Health,'** where speakers explored topics such as thyroid hormone's impact on the brain, neural disorder modeling using stem cells, and innovations in dairy nutrition for lifelong health. This was followed by **'Neuroimaging in Mental Health,'** which showcased advancements in brain imaging and AI for precision neurology, as well as MRI's role in Parkinson's care. A panel discussion in the afternoon brought together experts like Prof Christopher Walsh and Dr Shari Wiseman to discuss neurodevelopment and mental health. The day also included sessions on **'Mechanism of Mental Health Disorders,'** covering personalized depression treatments and gut-brain communication, and **'Behavior Interventions and Clinical Studies in Mental Health,'** which addressed sleep and wellbeing, genetic landscapes of human evolution, and early interventions for panic-related anxiety. The event concluded with closing remarks by Hongyan Wang.

During his key note speech, Professor Tan encouraged scientific exchange and collaboration at Duke-NUS, emphasizing that collaboration among basic scientists, clinician-scientists, and public health experts could bridge scientific depth with clinical impact. Participants were urged to challenge assumptions, explore bold ideas, and connect with experts, noting that transformative discoveries often stem from informal interactions like conversations over coffee or questions from trainees. To junior investigators and students, he highlighted the unprecedented tools available for studying the developing brain, such as single-cellomics, in vivo imaging, organoids, and large-scale cohort data, and inspired them to let their work's potential to shape lives guide their scientific journey. Finally, he called on participants to deepen their science, broaden perspectives, and strengthen collaborative networks for future discoveries in neurodevelopment and mental health.'

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