

ACHIEVEMENTS

# A Large-scale International Genetic Study of Bipolar Disorder in Asian Populations

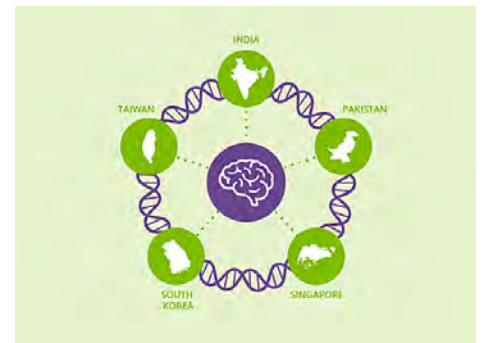
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Bipolar disorder (BP) is a severe multifactorial neuropsychiatric disorder that leads to intense shifts in mood, energy levels, and behavior. BP occurs in 1-2 percent of the general population, yet its genetic architecture remains a mystery. Although the Asian population accounts for nearly 60 percent of the world population, most participants of BP genetic studies are Europeans, only 10 percent of them are Asian. To fill in the missing genetic datasets and learn how genomic variation affects the biological basis of mental disorders, NTU researchers joined A-BIG-NET project to uncover the biological causes and mechanisms of BP among Asians. Their findings may reveal the genetic roots of the disorder and offer insights into the cause and treatment of BP.



Group photo of the international research team.

A-BIG-NET project is the first large-scale BP genetic study conducted on the Asian population, supported by a five-year grant from the National Institute of Mental Health. The project is a collaboration between Prof. Hailiang Huang of the Broad Institute of MIT and Harvard, Prof. Po-Hsiu Kuo of NTU, Prof. Kenneth Kendler of Virginia Commonwealth University, and Prof. Peter Zandi of Johns Hopkins University. Research teams from India, Singapore, Korea, and Pakistan also joined the project to help recruit participants, sequence the genomes, and analyze and share data.



An imagery representing A-BIG-NET project's international collaboration.

“Taiwan is often excluded from many major international organizations and actions. We are honored to be part of the global diversity initiative. It’s great to work with so many countries to conduct research on severe psychiatric disorders and help reduce health inequity in the long run,” remarked the project’s co-leader, Po-Hsiu Kuo, Associate Dean of NTU’s College of Public Health and Professor at the NTU Institute of Epidemiology and Preventive Medicine. The Taiwan team, co-led by Dr. Hsi-Chung Chen of the NTU Hospital Department of Psychiatry and Prof. Wei J. Chen, Director of the Center for Neuropsychiatric Research at National Health Research Institutes, will help gather patients and controls across Taiwan.



Po-Hsiu Kuo, Associate Dean of NTU’s College of Public Health, Professor at the Institute of Epidemiology and Preventive Medicine, and co-leader of A-BIG-NET project.

A-BIG-NET is set to collect and analyze DNA from 27,500 BP patients and 15,000 controls with the latest sequencing technology. Researchers will also collect clinical information and a range of environmental risk factors to study how genes and the environment jointly affect BP development. These data will benefit cross-populations and disorder studies, allowing researchers to analyze how Asian populations differ from European, African, and Latino populations.



Click or Scan the QR code to learn more about A-BIG-NET project.