

Welcome All to the Inaugural Issue of A-BIG-NET's Newsletter!

We're thrilled to bring you the very first edition of our bi-annual scientific newsletter, designed to keep you up-to-date with the latest developments, insights, and achievements across the A-BIG-NET project. Moving forward, you can expect to receive a fresh edition every six months, packed with highlights from recent research, updated study goals, and a closer look at the people driving our work forward.

This newsletter is more than just an update; it's a celebration of the collective efforts from our team. We want to extend a heartfelt thank you to everyone who has contributed to our success thus far. Your hard work, passion, and curiosity are what make our progress possible, and we're excited to share the incredible strides we've made together.

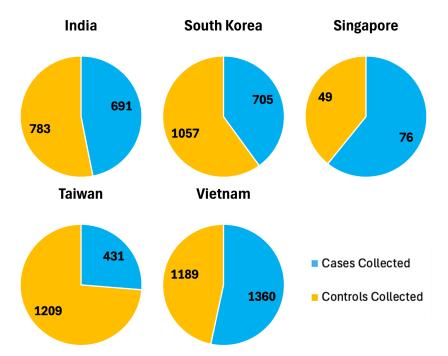
Thank you for being a part of this journey—we're looking forward to sharing each new chapter with you!

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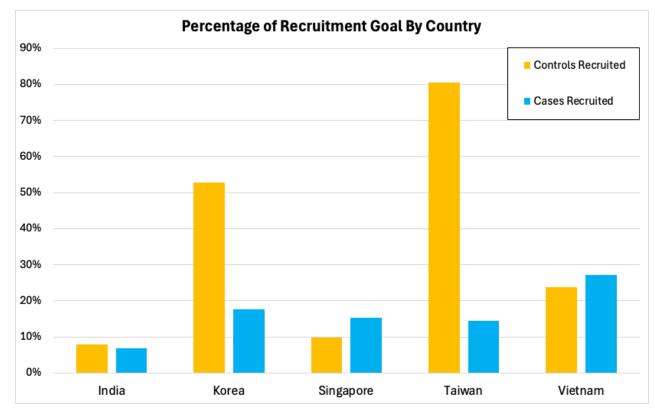
Recruitment and Sequencing Update



All A-BIG-NET countries have begun participant recruitment and we are excited to highlight each country's progress in the charts below. Let's keep up the momentum!

Progress Worth Celebrating! 🎉

Take a look at how far we've come! The bar graphs below highlight our recruitment progress against our targets, and it's all thanks to the incredible dedication and teamwork across all teams.



Broad have BGE sequenced a total of 5272 A-BIG-NET samples from Pakistan (4807), Vietnam (465), and Singapore (20). The BGE data have been staged to cloud workspace and are available for analyses. In India, we executed a service agreement with MedGenome to pilot testing the BGE (Blended Genome Exome) sequencing technique. 1,000 A-BIG-NET samples will be sequenced in the coming months, and the data will be available for analyses.

World Congress of Psychiatric Genetics (WCPG) and Ancestral Populations (APN) Annual Meeting

This year's World Congress of Psychiatric Genetics (WCPG) was held in Singapore and the international team members of A-BIG-NET gathered to discuss the vast spectrum of psychiatric genetic research across different populations and cultures. This year's WCPG meeting focus was on the importance of diversity in psychiatric genetic studies. The Education Day chair, Lori Chibnik, organized a panel of international scientists to speak on their experiences in embracing heterogeneity and diverse cultural practices.

The Ancestral Populations Network (APN) Annual Meeting was held at the Institute of Mental Health (IMH) after WCPG.



Highlights:

WCongratulations to Ji Won Yeom for giving an A-BIG-NET project presentation at the APN meeting!

Scongratulations to Soohyun Park, Van Phi Nguyen and Thi Minh Tam Ta for being selected as sponsored talks at the APN meeting!

Congratulations to Bhagyalakshmi Shankarappa, Pradip Paul, Kathirvel Kandasamy, Chiao-Erh Chang for giving lightning talks at the APN meeting!

Congratulations to Zhenglin Guo on presenting A-BIG-NET in the PGC Diversity Session at WCPG!

Data Management, Quality Control & Data Freeze

The A-BIG-NET Data Management (DM) team has now set up an automatic data intake and quality control pipeline for all phenotypic data from REDCap. The phenotyping team and collection sites continue to receive regular QC reports to address inconsistencies from the interview and data collection, balancing demographic details from case and control cohorts, as well as supporting re-training needs for local interviewers.

We are planning the first A-BIG-NET data freeze in spring 2025 including both phenotypic and genomic data. For the phenotypic data, A-BIG-NET DM team is currently working on building the infrastructure for the dataset and data cleaning. The cleaned dataset and codebook will be released at the end of data freeze. For the genomic data, we currently have sequenced 5272 samples at Broad. In early spring of 2025, we are expecting to receive another 5000 samples at Broad for BGE sequencing.

Once the data freeze is completed, we will stage data in a collaborative cloud workspace available for sharing and joint analysis. The process of requesting data access and collaborating in manuscript is described in the collaboration guideline that will be circulated soon.

Collaboration Guideline: A-BIG-NET Collaboration Guideline

As our first data freeze is coming close, we would like to share this guideline to facilitate the data sharing and collaboration across sites. A-BIG-NET encourages collaboration, transparency, and open communication. We are delighted to support you in accessing data, connecting with colleagues and jointly analyzing data.

A-BIG-NET 2 Grant Renewal:

A-BIG-NET 2 will submit as a <u>U01 grant</u> in June 2025, aiming to achieve better power (sample size) and diversity (phenotypes and populations). These aims are still in the early stages and will need further development with your input and help.

- Aim 1: Expanding ascertainment and phenotyping
 - 1a, expand the ascertainment criteria to include schizophrenia and schizoaffective. Proportion of schizophrenia < 50% in new recruitment
 - 1b, large-scale language model for phenotyping
 - 1c, add neurocognition
- Aim 2: operationalize aim 1:
 - Start Indonesia (5K cases)
 - New recruitment: 10K cases each(Pakistan, India, Vietnam), TBD(Singapore, Taiwan, Korea)
 - Recontact: 10K cases each(Pakistan, India, Vietnam), TBD(Singapore, Taiwan, Korea)
 - Biospecimen banking when feasible
- Aim 3: Analysis
 - Phenotype harmonization
 - Genetic data processing
 - Association analyses
- Aim 4: capacity building and community engagement (Mandatory aim)
 - Community: Focus group to get feedback from subjects in study design, return of result, research topics, etc
 - Community: Education campaign for public
 - Community: Lived experience (meet w/ subject every 3-4 months)
 - Capacity: Leverage the APN-2 CC, participate in workshops
 - Capacity: Mentor trainees to conduct research projects on A-BIG-NET data
 - Capacity: Visiting scholars(TBD)
 - Infrastructure: add the capacity to store and process PBMC, sequencing(TBD)

Working Groups

We established five working groups to further discuss each study's aims for A-BIG-NET 2 in June 2025. If you are interested in joining a working group, please sign up in this sheet: **A-BIG-NET Working Groups**

Below are the current working groups, and current members.

- Ascertainment, Phenotype Spectrum (aim 1a, c): Ken (Chair), Sanjeev, Eric, Jayant, Ayub, Jake, Fernando
- NLP Phenotyping (aim 1b): Peter (Chair), Sanjeev, Eric, Jayant, Ayub, Po-Hsiu, Phi
- Operations and Recruitment (aim 2): **Hailiang (Chair)**, Biju, Jayant, Po-Hsiu, Phi, Jimmy, James, Arsalan, Ayub, Max, Ji Won, HJ
- Training & Capacity Building: Lori Chibnik (Chair), Biju, Meera, Tam, Eric
- Community Engagement Working Group: We are looking for a chair for the community engagement working group! Ayub, Biju to nominate a team member

Site Visits:

The site visits aim to strengthen partnerships, conduct reviews of protocols, engage in productive conversations with the local teams, and streamline workflows for efficient data collection and analysis. Thank You to all the local hosts and teams for the wonderful visits so far!

Taiwan Site Visit (Oct 2022 and Dec of 2023)

Visiting Team	Local Hosts
Steve Hyman (Stanley Center)Hailiang Huang (Stanley Center)	 Po-Hsiu Kuo (National Taiwan University)

With the launch of A-BIG-NET, Stanley Center members visited the first study site to launch in Taiwan! Steve Hyman met with the leaders of National Taiwan University and it provided an exciting opportunity to grow the relationships with our collaborators for A-BIG-NET. Hailiang also visited Taiwan to meet with the study team and teach a statistical genetics workshop to facilitate the launch of the Taiwan sites!



Korea Site Visit (Jul 29 - Aug 2, 2023)

Visiting Team	Local Hosts
 Steve Hyman (Stanley Center) Hailiang Huang (Stanley Center) Sinéad Chapman (Stanley Center) Jen Pan (Stanley Center) 	 Heon-Jeong Lee (Korea University) Ji Hyun Baek (Samsung Medical Center) Ji Won Yeom (Korea University)

Members from the Stanley Center visited the Korean A-BIG-NET sites in Seoul. The team began at Korea University College of Medicine, touring the university and hospital. The team then visited the Samsung Medical Center. At the sites, the team met with the local Korean team and conducted special lectures, followed by a Q & A. Afterwards, the US team visited Macrogen, a sequencing company in Korea to tour the lab and sequencing facilities.



Vietnam Site Visit (Dec 10 - Dec 15, 2023)

Visiting Team	Local Hosts
 Steve Hyman (Stanley Center) Hailiang Huang (Stanley Center) Zhenglin Guo (Stanley Center) Po-Hsiu Kuo (National Taiwan University) Julia Kraft (Charite University) Alice Braun (Charite University) 	 Nguyen Huu Tu (Hanoi Medical University) Nguyen Van Tuan (Hanoi Medical University) Nguyen Van Phi (Hanoi Medical University) Thi Minh Tam Ta (Hanoi Medical University) Eric Hahn (Charite University) Nguyen Le Quyen (Hanoi Medical University) Pham Thi Thu Huong (Hanoi Medical University)

Members from the Stanley Center, National Taiwan University, and Charite University visited the Vietnam A-BIG-NET sites in Hanoi and Da Nang. The team began at Hanoi Medical University and toured the project room and genetics lab. The team then met with the hospital leadership team, as well as the director of the National Institute of Mental Health (NIMH) in Vietnam. The visiting team members then participated in the A-BIG-NET training in Da Nang, and had the opportunity to discuss project ideas further with the local team members. The Vietnam team showcased their dedication to the collection efforts throughout the visit with their presentations and insightful questions for the visiting members. The Vietnam team created a well-documented SOP for their local sites to use and created an impressive standardization standard for themselves.



India Site Visit (Mar 8 - Mar 17, 2024)

Visiting Team	Local Hosts
 Steve Hyman (Stanley Center) Hailiang Huang (Stanley Center) Kenneth Kendler(Virginia Commonwealth University) Peter Zandi (Johns Hopkins University) Felecia Cerrato (Stanley Center) Jess Wang (Stanley Center) Wilson Chiang (National Taiwan University) 	 Biju Viswanath (NIMHANS) Jayant Mahadevan (NIMHANS) Bratati Kahali (IISc) Nishant Goyal (CIP) Sourav Khanra (CIP) Lokesh Singh Shekhawat (ABVIMS/RML) Rajesh Sagar (AIIMS) Raman Deep (AIIMS) Sandeep Grover (PGIMER)

The trip began at the National Institute of Mental Health and Neurosciences (NIMHANS) with an A-BIG-NET all-India PI meeting. The team attended the Bipolar Disorder International Conference (BDICON) held at NIMHANS, where they presented their current research findings and participated as panel members. The team also visited the Indian Institute for Science Center for Brain Research (IISc CBR), and 4 additional recruiting sites: Central Institute for Psychiatry (Ranchi), ABVIMS and RML hospitals, and the All India Institute of Medical Sciences (New Delhi), and PGIMER (Chandigarh).

The team toured hospital facilities, met with the site and study leadership, spent time with the trainees, and discussed the next steps to launching the A-BIG-NET study protocol. Dr. Ken Kendler delivered scientific talks at each site on the history, nosology, and recent genetic findings in mood disorders. It was truly inspiring to witness the dynamic interaction between our teams and everyone's genuine eagerness to collaborate on such a pivotal endeavor.



India Site Visit (Oct 21 - Oct 28, 2024)

Visiting Team	Local Hosts
 Hailiang Huang (Stanley Center) Kenneth Kendler(Virginia Commonwealth University) Peter Zandi (Johns Hopkins University) Sinéad Chapman (Stanley Center) 	 Biju Viswanath (NIMHANS) Jayant Mahadevan (NIMHANS) Bratati Kahali (IISc) Raghu Padinjat (NCBS) Poornachandrika P (IMH) Bevin S (IMH) Vikas Menon (JIPMER)

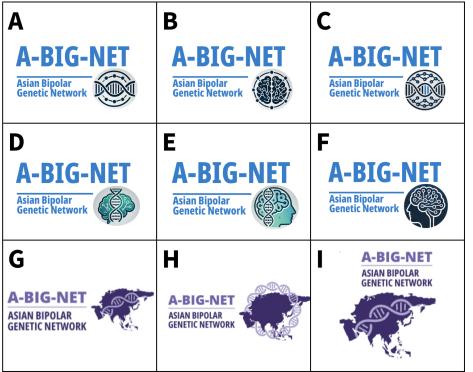
Four members of the A-BIG-NET USA team traveled to India after WCPG to conduct site visits at 3 sites and meet again with our collaborating leads at NIMHANS and CBR. With incredibly attentive chaperoning from Dr. Jayant as we navigated the busy streets, and a few highway cows and sheep, the team maneuvered successfully between Chennai, Puducherry, Bengaluru, and Lucknow! The team toured the inpatient facility, medical records rooms and hospital library at the Chennai Institute of Mental Health (IMH), conducted a mock patient recruitment interview at JIPMER Hospital in Puducherry and KGMU Lucknow, and discussed DNA extraction and data analysis in NIMHANS.



Updated A-BIG-NET Website

We're excited to announce the launch of our new website, designed to serve as the central hub for A-BIG-NET! This platform provides comprehensive information about the project's goals, progress, and impact, as well as resources for collaborators, stakeholders, and the scientific community. With features like downloadable resources, direct access to the shared google drive, the site is built to foster collaboration and transparency. Visit <u>https://abignet.org/</u> to explore our journey and stay connected with the latest developments!

Feedback Request: Logo and Website Suggestions



Vote on our Logo! We are in the process of generating a logo for A-BIG-NET and have drafted a few possible examples. Please find the QR code and link to a google form and send us some feedback. We are looking for any input or suggestions for both the website and logo.

https://forms.gle/HxZmWgftv3gr6E9V8



Thank you for reading our first inaugural newsletter! Happy Holidays to all!

