

# NeuroGAP Newsletter

## April 2024

The NeuroGAP team lost a dear colleague and friend to cancer last month. Dr. Edith Kwobah, was a co-investigator on NeuroGAP-Psychosis at Moi Teaching and Referral Hospital. She was an amazing person, who was smart, passionate, and caring and dedicated to teaching people in her community about mental health. As one of a handful of psychiatrists in the region, Edith played a critical role in patient care at Moi. She will be deeply missed.



## GINGER:

This January the GINGER program began its final semester of virtual classroom programming for the current group of fellows. In January and February, fellows covered Fine Mapping and Genetic Correlation taught by Teaching Fellows Ran Cui and Kumar Veerapen. Following, Donald Halstead of the Harvard T.H. Chan School led a three week series on grant writing, with a specific focus on K43s.

GINGER Director Kristi Post recently traveled to Kenya and Uganda and was able to meet with GINGER Fellow Raymond Odokonyero and Dr. Akena in Kampala, and with GINGER Fellow Patricia Kipkemoi in Nairobi.

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## **NEUROGENE:**

We would like to extend our congratulations to the NeuroGene team for another publication from their collaborative work on Digital Mental Health:

Interdisciplinary perspectives on digital technologies for global mental health. (2024) PLOS Glob Public Health 4(2): e0002867. Kuhn E, Saleem M, Klein T, Köhler C, Fuhr DC, Lahutina S, Anna Minarik, Musesengwa R, Neubauer K, Olisaeloka L, Osei F, Reinhold A S, Singh I A, Spanhel K, Thomas N, Hendl T, Kellmeyer P ,Böge K. <https://doi.org/10.1371/journal.pgph.0002867>

We are also very excited to welcome **Dr Michael Wee** to the NeuroGene team!

Dr Wee is a Postdoctoral Researcher in Global Mental Health Ethics and will be focusing on the ethics of genomic research for neurodevelopmental disorders, with a particular focus on the socio-cultural issues arising from such research done in an African context. He will be specifically working on the normative aspects of the Fogarty funded NeuroDev Ethics of Cell line Creation.



We would also like to congratulate the AEWG for having their proposal accepted for a workshop to be held during the Oxford Global Health & Bioethics International Conference which will be at the Oxford University in July 2024. The workshop entitled “Ethics, Neuropsychiatry, and Genomics/Genetics Research” will focus on the different empirical ethics research projects that are coordinated under the African Ethics Working group (AEWG) and NeuroGenE (Global Initiative in Neuropsychiatric Ethics). The workshop will have a session where AEWG members will present three case studies based on the empirical ethics studies conducted across the different African settings, and this will be followed by a panel discussion.

## **NEURODEV:**

The NeuroDev team in Cape Town is wrapping up with the return of individual results to participants and their families from Wave 1. Close to 50 individuals have received an answer as to why their child has a neurodevelopmental delay.

Nolene Chetty, a MMedSc student, has completed her research on “Experiences of Stigma in South African Families with Neurodevelopmental Disorders” and submitted her dissertation for examination. We are incredibly grateful for this work and the light that has been shed on stigma.



In Kenya, the team at KEMRI continues to collect data from participants in Kilifi county. They continue to work closely with the community health volunteers for referrals to the study. The team has also been preparing for the expansion to Mombasa county through a collaboration with APDK and Port Reiz Hospital.

Both the AKU team in Nairobi and the UCT team in Cape Town have been focusing their efforts on the Akili study, funded by a collaborative R01, which is a prospective collection and analysis of genetic and phenotype data from 6000 children with ADHD and 4000 controls.

Dr. Elise Robinson, Broad PI, visited Dr. Amina Abubakar at AKU and Dr. Kirsty Donald at UCT in February to catch up on NeuroDev and discuss progress and plans for the Akili study.

## **NeuroGAP-Psychosis:**

Amantia Ametaj and Bizu Gelaye were honored recently by the Psychiatric Genomic Consortium (PGC) Africa for their work building capacity in scientific writing for early career researchers in Africa. They co-led the Phenotype Working Group in connection with NeuroGAP-Psychosis where they mentored 13 junior researchers, primarily psychiatrists, in analyzing data from the study and writing academic papers. The program has led to 11 first-author publications for African authors so far.

Congratulations to Amantia and Zahra Morawej on publishing their papers from the Phenotype Working Group:

- Ametaj et al. (2024). Cross-cultural equivalence of the Kessler Psychological Distress Scale (K10) across four African countries in a multi-national study of adults. SSM Mental Health.
- Morawej et al. (2024). Experiences of trauma and psychometric properties of the Life Events Checklist among adults in Uganda. PLOS One. (In print)

Blended genome exome & genetic analysis progress:

- All NeuroGAP-Psychosis DNA has been sequenced and the data is going through a quality assurance and quality control process now. Expected completion date: July 2024.
- Imputation of genotypes from the sequence data is 75% complete.
- Dan Stein, Solomon Teferra, Alicia Martin, Ben Neale and others published a pre-print this month about the creation of the BGE: <https://www.biorxiv.org/content/10.1101/2024.04.03.587209v2>.

## **SPECIAL ANNOUNCEMENTS:**

GINGER Alum and NeuroGAP-Psychosis Project Manager from Ethiopia, Melkam Alemayehu, gave birth to a daughter last month. Her current nickname is Pommy (pictured right).

NeuroDev Alum and Director of the NeuroDevelopmental Variability Initiative (NDV) at the Broad Institute, Celia Wood, welcomed her second daughter last month.

Congratulations to both Melkam and Celia!



### **We welcome two new members to the NeuroGap Team:**



**Daniel Bustamante** recently joined the Harvard team as postdoctoral fellow. He will be working on investigating item level and underlying structure of schizophrenia and bipolar disorder, and their polygenic-risk association in the NeuroGAP sample, using blended genome-exome (BGE) sequencing data. Additionally, Daniel will be collaborating in projects with the Phenotype Harmonization working group of The Ancestral Populations Network, and with the BGE group. He will also be collaborating in capacity building efforts with NeuroMex partners.

During his PhD, Daniel research examined how variation in genetic factors and brain-structure were linked to higher risk for substance use, PTSD-related, and other psychiatric phenotypes in children, adolescents, and adults. He is originally from Peru.

**Dr. Manasi Sharma** is a psychiatric epidemiologist, with expertise in trauma and mental health in humanitarian settings, psychometrics, mediation analysis, and implementation science with a focus on Sub-Saharan Africa. Dr. Sharma completed her PhD and postdoctoral training at Harvard TH Chan School of Public Health and Harvard Medical School and was most recently working at UNICEF's Office of Research, Office of Evaluation, and East Asia & Pacific Regional Office, developing the organization's child and adolescent mental health research and programming guidelines.

In her new role, Manasi will be working on capacity building activities and journal publications for the NeuroGAP-Psychosis study and supporting the implementation of Karestan Koenen's projects in Africa.

