

## **Dr. Salil Sukumaran of ADBS Program received the Hugh Gurling Award 2020, World Congress of Psychiatric Genetics**

Dr. Salil Sukumaran from ADBS-NIMHANS was conferred the prestigious Hugh Gurling Award for Best Poster at the World Congress of Psychiatric Genetics 2020 for his research finding in brain development. Using biological resources generated through the ADBS program, the researchers at ADBS-NIMHANS identified deleterious coding variants in two genes, *NRG2* and *LAMA1*, which control cell migration. Analysis of RNA-sequences revealed that expression of these genes was changed in patient-derived neural stem cells, which was also observed in experiments that test cell movement and migration in laboratory culture conditions. These indications of altered cellular behavior correlated with analysis by an imaging technique - MRI - revealing cortical thinning, which could arise because of defective migration of neural stem cells during brain development.

Dr. Salil was one of ten finalists shortlisted worldwide and he received the 2020 award for his poster titled '*Damaging variants in NRG2 and LAMA1 in bipolar disorder may impair neuronal migration.*' Exome and transcriptome sequencing (and analysis) was conducted at inStem, the neural stem cells were generated in the laboratories at NCBS-inStem, and the analysis of cells were conducted at NIMHANS, where the patients are enrolled, deep clinical phenotyping and imaging completed and also provided clinical follow up and care.



The biology behind bipolar disorder, a severe mental illness, remains elusive. Ongoing studies and a recent report from National Institute of Mental Health and Neuro-Sciences (NIMHANS) as part of the Accelerator program for Discovery in Brain disorders using Stem cells (ADBS) consortium, DBT- Institute for Stem Cell Science & Regenerative Medicine (DBT-inStem), and National Centre for Biological Sciences (NCBS), Bengaluru has brought us one step closer to the answer.

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