



NBRC Research Projects Highlighted in



DBT Achievements of the Year 2021

SWADESH:

Project SWADESH aims to build India's brain initiative focusing on neuroimaging, neurochemical, neuropsychological data and analytics for managing various brain disorders. This project is unique in that it contains certified data where researchers can access neuroimaging data and comparative analyses of various brain disorders. The project is a result of the efforts of the Neuroimaging and Neurospectroscopy Lab (NINS) headed by Prof. Pravat Mandal in developing neuroimaging-related projects at National Brain Research Centre (NBRC) in India.

SWADESH proposes a big-data architecture for managing and analyzing six modules: neurodegenerative such as AD, MCI and PD; neuropsychiatric such as schizophrenia and bipolar disorder; neurodevelopmental such as autism and epilepsy; COVID-19 related disorders; other disorders and healthy subjects. To the best of our knowledge, this is the first large-scale multimodal neuroimaging database initiative designed specifically for the Indian population with big-data architecture and data analytics for various disease categories under one platform.

PI-Prof. Pravat Kumar Mandal

<http://www.nbrc.ac.in/newweb/research/groups/PM>

ZIKA VIRUS:

Zika Virus (ZIKV) infection is associated with micro encephaly which is manifested as babies born with smaller head and under developed brain. WNT2 involved in cell fate determination was found to be downregulated in response to ZIKV protein in human fetal neuronal stem cells. This finding provides a basis to ZIKV induced neurological complications in infants born to mothers who were infected by the mosquito borne virus during their pregnancies.

PI-Prof. Pankaj Seth

<http://www.nbrc.ac.in/newweb/research/groups/pankaj-seth>



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