

Genetic test predicts Autism risk

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Genetic test predicts risk for Autism



Singapore: A team of Australian researchers, led by University of Melbourne has developed a genetic test that is able to predict the risk of developing Autism Spectrum Disorder, ASD.

Lead researcher Professor Stan Skafidas, Director of the Centre for Neural Engineering at the University of Melbourne said the test could be used to assess the risk for developing the disorder. "This test could assist in the early detection of the condition in babies and children and help in the early management of those who become diagnosed," he said. "It would be particularly relevant for families who have a history of Autism or related conditions such as Asperger's Syndrome," he said. "â€"

Clinical neuropsychologist, Dr Renee Testa from the University of Melbourne and Monash University, said the test would allow clinicians to provide early interventions that may reduce behavioural and cognitive difficulties that children and adults with ASD experience. "â€"

"Early identification of risk means we can provide interventions to improve overall functioning for those affected, including families," she said. "â€"

A genetic cause has been long sought with many genes implicated in the condition, but no single gene has been adequate

for determining risk. Using US data from 3,346 individuals with ASD and 4,165 of their relatives from Autism Genetic Resource Exchange (AGRE) and Simons Foundation Autism Research Initiative (SFARI), the researchers identified 237 genetic markers (SNPs) in 146 genes and related cellular pathways that either contribute to or protect an individual from developing ASD. â€”

Senior author Professor Christos Pantelis of the Melbourne Neuropsychiatry Centre at the University of Melbourne and Melbourne Health said the discovery of the combination of contributing and protective gene markers and their interaction had helped to develop a very promising predictive ASD test.

The test is based on measuring both genetic markers of risk and protection for ASD. The risk markers increase the score on the genetic test, while the protective markers decrease the score. The higher the overall score, the higher the individual risk.

"This has been a multidisciplinary team effort with expertise across fields providing new ways of investigating this complex condition," Professor Pantelis said.