autistica

Science in the Service of Autism

Scientists report important advance in the big autism question: What causes autism?

Researchers around the world are welcoming what one has described as 'a giant step forward' in the quest to solve one of medicine's most puzzling questions: what causes autism?

An international team of medical researchers has revealed in the authoritative journal 'Nature' that they are now much closer than before to understanding the genetic mechanisms which underlie so-called autism spectrum disorders (ASDs).

The Autism Genome Project (AGP) which brings together scientists from across the world reports that 'losses and duplications of whole chunks of DNA in an individual are likely to play a role in ASDs'. They found that people with autism had on average 19 percent more 'copy number variants' than the norm.

Earlier research had established that genes play a major role in autism. The latest findings - Phase 2 of the seven year old project – go further in showing how autism appears to result from a combination of genetic variations in the individual.

Dr Jenny Longmore Research Director of Autistica, one the project's funders, described the AGP report as 'a giant leap forward'

Dr Longmore said: 'It is a giant leap because to adds to existing knowledge and also verifies and consolidates what was previously known. It pulls together the new and previous findings on genetic variation and make sense of what they actual mean – with the upshot that the genetic variations fall into a number of distinctive biological pathways / mechanisms. Altogether this creates a very strong reliable platform for further work, specifically to figure out what the genetic variations do to these pathways and secondly provides a roadmap towards a better understanding of the development of improved methods for diagnosis and design of new interventions.'

The British contribution to the project has been led by the Wellcome Trust Centre for Human Genetics at Oxford headed by Professor Tony Monaco.

Professor Monaco emphasised the potential benefits of the research in identifying at an earlier age children at risk for autism.

He also said: 'Just knowing about these genetic changes can help families come to terms with their child's autism.'

The latest findings also strongly suggest a link between autism and other developmental disorders such as learning disability and perhaps epilepsy and schizophrenia.

More press coverage:
http://www.telegraph.co.uk/health/healthnews/7814775/Dozens-of-genetic-mutations-linked-to-autism-in-children-discovered.html

http://www.dailymail.co.uk/health/article-1285349/Autism-blood-test-available-years.html