

Genetic link to gender identity

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In the largest ever genetic study of male to female transsexuals Australian researchers have found a significant genetic link between gender identity and a gene involved in testosterone action.

From an early age people develop an inner sense of being male or female – their gender identity. Transsexuals however, identify with a physical sex opposite to their perceived biological sex.

DNA samples were collected from 112 male to female transsexuals and researchers compared genetic differences with non transsexuals. The results are published in the high impact journal *Biological Psychiatry*.

The researchers discovered that male to female transsexuals were more likely to have a longer version of a gene which is known to modify the action of the sex hormone testosterone.

"We think that these genetic differences might reduce testosterone action and under masculinise the brain during foetal development." said researcher Lauren Hare.

For decades, there has been debate over the causes of transexuality. Early theories included psychosocial factors such as childhood trauma. More recent studies have indicated that family history and genetic aspects are linked to the development of gender identity.

"There is a social stigma that transsexualism is simply a lifestyle choice, however our findings support a biological basis of how gender identity

develops." said study leader Associate Professor Vincent Harley, Head of Molecular Genetics at Prince Henry's Institute.

"As with all genetic association studies it will be important to replicate these findings in other populations" said Associate Professor Vincent Harley.

Researchers are now planning even larger genetic studies and are investigating a wider range of genes that may be related to gender identity.

Source: Research Australia

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