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**Under strict embargo until
00.01am Monday 27 Oct (AEDT)**

Genetic link to gender identity

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.

**Online briefing for journalists
Friday 24 October 10.30am AEDT
Contact info@aussmc.org for further information**

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Further Information

Androgen Receptor (AR) Repeat Length Polymorphism Associated with Male-to-female Transsexualism. Authors: Lauren Hare, Pascal Bernard, Francisco J. Sanchez, Paul N. Baird, Eric Vilain, Trudy Kennedy and Vincent R. Harley. The research will be published in the Jan 2009 edition of Biological Psychiatry. Advance online publication date 27 Oct 2008.

This international study involved researchers at Prince Henry's Institute, Monash Gender Dysphoria Unit, Monash University, Melbourne University, the University of California, Los Angeles in the USA.

The research was funded by the National Health and Medical Research Council Australia and the US National Institutes of Health.

For more information contact Ian Muchamore, Science Communication, Email: ian.muchamore@princehenrys.org

About Prince Henry's Institute

Prince Henry's Institute (PHI) is committed to improving the quality of life through the investigation of hormones and has a team of 130 people dedicated to scientific excellence.

PHI is world renowned for its research into reproduction and endocrinology, the study of hormones. The Institute's research focuses on the role of hormones in cancer, reproductive health, diabetes, obesity and heart disease.

Established in 1960 as the Medical Research Centre at Prince Henry's Hospital in South Melbourne, PHI is now an independent Institute based at Monash Medical Centre in Clayton, Melbourne, Australia.

It is funded by federal and state government grants and supported by individual, business and community groups

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