

FEMALES BATTLE TO SUPPRESS THEIR INNER MALE

The discovery by German scientists that turning off a single gene can cause masculinity in female mice could have important implications for humans, according to world renowned genetics expert Professor Andrew Sinclair, from the Murdoch Childrens Research Institute.

The study by The European Molecular Biology Laboratory in Heidelberg, published today in *Cell*, found switching off the gene that controls the ovary, known as FOXL2, caused female mice to develop testis with testosterone levels as high as male mice.

In a preview of the paper in *Cell*, Professor Sinclair said the breakthrough could help explain cases of premature ovarian failure and disorders of sex development in humans.

“This study has demonstrated something quite extraordinary by showing how loss of a single gene can reprogram the ovary to develop into a testis even in adulthood,” Professor Sinclair said.

“The FOXL2 gene is required to maintain the ovary but its key function is to constantly suppress male genes in order to stop the ovary turning into a testis.

“Alterations in this gene in humans could result in premature ovarian failure and disorders of sex development.”

Professor Sinclair is leading a study at the Murdoch Childrens Research Institute, Melbourne, to find out how the gene works in humans.

“We are examining women with premature ovarian failure and disorders of sex development to look for alterations in their FOXL2 gene.”

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