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## Genetic susceptibility to infertility

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Unsuccessful attachment and implantation of blastocysts in the endometrium is the main reason for infertility and failure of *in vitro* fertilization techniques. MUC 1 mucin, an O-glycosylated epithelial glycoprotein, extends beyond the endometrial glycocalyx and is probably the first molecule that the embryo encounters on attachment. In the 28 April *Lancet*, Andrew Horne and colleagues from Imperial College School of Medicine, London suggest that women with unexplained infertility might have a genetic susceptibility to failure of embryo implantation due to small MUC 1 mucin allele size.

Horne *et al.* assessed the variation in size of the MUC 1 gene in 20 women (ten infertile and ten who had had successful pregnancies). The median of the lower allele size in the infertile group was only 2.5 kb compared with 3.4 kb in the fertile group (*Lancet* 2001, **357**:1336-1337).

The authors believe that the association between MUC 1 allele size and failure of embryo implantation might have broader implications. The function of other epithelial cells that express MUC 1 gene, in organs such as the stomach and the breast, can be affected too.

## References

1. Horne AW, White JO, Margara RA, Williams R, Winston RML, Lalani E-N: MUC 1: a genetic susceptibility to infertility? *Lancet* 2001, 357:1336-1337., [<http://www.thelancet.com>]
2. Imperial College School of Medicine, [<http://www.med.ic.ac.uk/>]