IBD sharing around the *PPARG* locus is not increased in dizygotic twins or their mothers

Busjahn *et al*[1] reported finding linkage between *PPARG* (3p25) and being a dizygotic (DZ) twin. We differentiate, as do the authors, between the conception of DZ twins, and being the viable result of such a conception.

We observe no evidence of linkage to the region around the PPARG locus in several samples of DZ twins who have been genotyped at multiple markers on chromosome 3 (Fig. 1). Among 199 Australian DZ twins ascertained for a history of wheezing[2], mean identity by descent (IBD) sharing at the position of *PPARG* is 0.463 (99% bootstrapped confidence interval=0.412–0.516). We obtained a similar result with 232 pairs of Australian adolescent DZ twins taking part in a longitudinal study of naevus development[3] (0.444, 0.390–0.499), and a set of 125 Australian adult DZ twin pairs assessed for anxiety[4] (0.508, 0.435–0.580). A Dutch scan of 160 DZ twin pairs[5] obtained slightly more encouraging results (0.553, 0.482–0.587, peak maximum lod score (MLS)=0.57). Pooling all these samples gives 0.477 (0.454–0.512) at the position of *PPARG*. The test for heterogeneity of sharing between studies was not significant (P=0.10). In the combined dataset, the peak IBD sharing (MLS=0.70) is 50 cM closer to the centromere than *PPARG*.

Finally, in a sample of 203 Australian and New Zealand sister pairs where each had given birth to DZ twins[6], sharing across the region is also not increased (0.433). We do not replicate linkage in the populations we study to survival of a twin pregnancy or polyovulation.

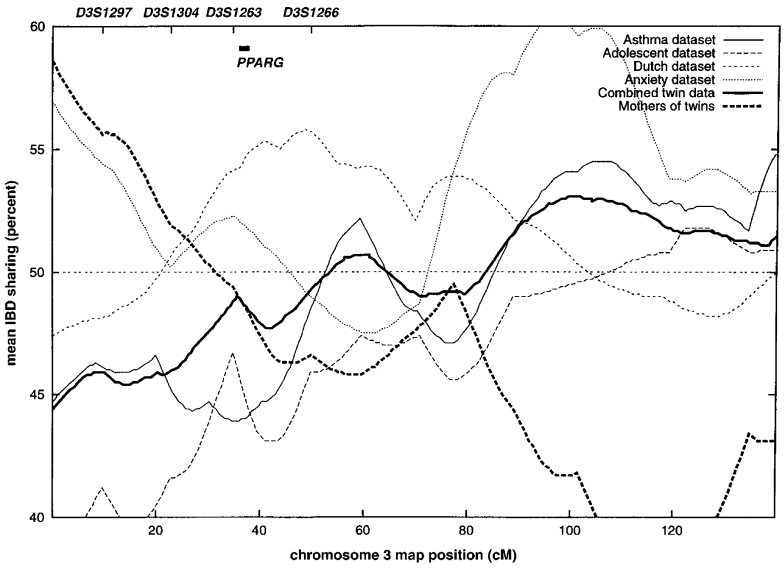

Fig. 1 Mean IBD sharing from five studies of DZ twins and twinning.

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