Essays in Biochemistry (2020) **64** 681
https://doi.org/10.1042/EBC20170053_COR

PORTLAND PRESS

Correction

Correction: The genetic basis of disease

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Essays Biochem. (2018) volume 62, issue 5, pages 643–723; https://doi.org/10.1042/EBC20170053

Figure 6 (Segregation of reciprocal translocations) contains a factual error in that the outcomes of 'adjacent 1' and 'adjacent 2' segregation paths are swapped. During 'adjacent 1' segregation, chromosomes 1 and 3, and chromosomes 2 and 4 are segregated into separate gametes. 'Adjacent 2' segregation leads to the formation of gametes containing chromosomes 1 and 2, and 3 and 4. The correct version of the figure is presented here.

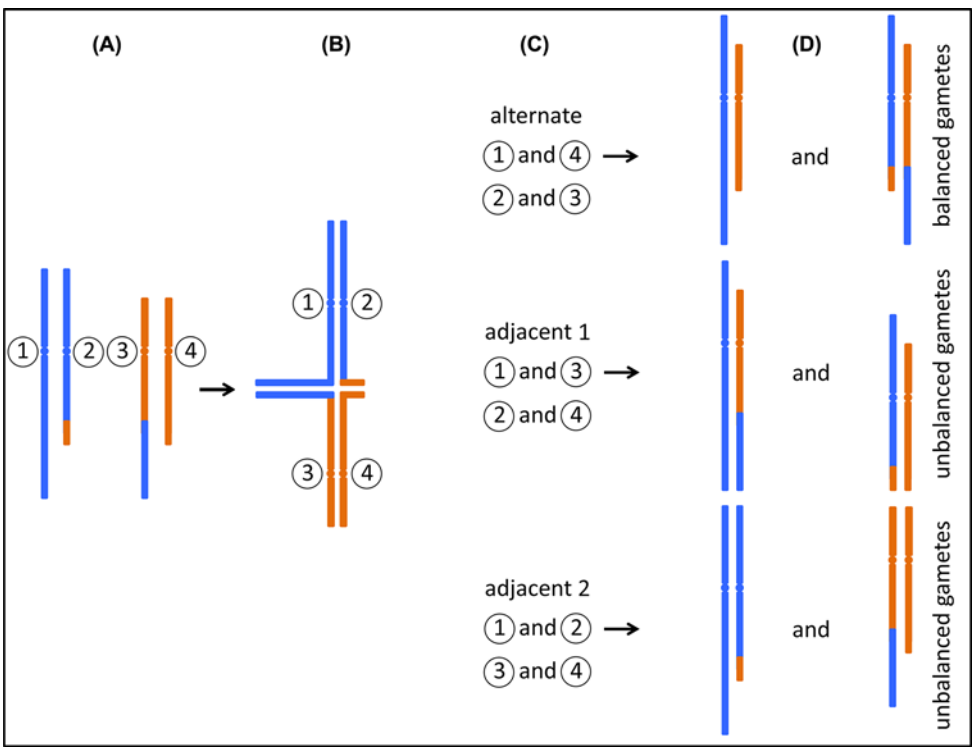

Figure 6. Segregation of reciprocal translocations

(**A**) A carrier of a reciprocal translocation has one unaltered copy of each chromosome that participates in the translocation, together with two hybrid chromosomes. Only the relevant chromosomes are shown, for illustration each is labelled with a circled number. (**B**) During meiosis, replicated sister chromatids pair up with their homologues. In the case of a translocation carrier, so-called 'quadrivalents' can form, in which four instead of two chromosomes pair up. (**C**) Three possible segregation paths are illustrated. During 'alternate' segregation, chromosomes 1 and 4, and chromosomes 2 and 3 are segregated into separate gametes. 'Adjacent 1' and 'Adjacent 2' segregation leads to different combinations as indicated. Note that other segregation patterns can also occur, e.g. where three chromosomes segregate into one gamete, and only one into the other. (**D**) Only alternate segregation leads to gametes which either carry the two unaltered, 'normal' chromosomes, or the two hybrid chromosomes. Zygotes formed from these gametes are expected to be phenotypically normal (unless there is a critical gene disruption at the translocation breakpoint). However, in the other two instances, all gametes carry one unaltered and one hybrid chromosome. Fertilisation of these gametes leads to zygotes carrying partial trisomy of one chromosomal segment, and partial monosomy of a different segment.

Version of Record published:
28 July 2020