

Chromosomes Are Present in a Fixed Region on the Equatorial Plate Within the Interphase of Cell Division

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Abstract : The stability and evolution of human genetics depends on chromosomes (and chromosome-chromosome interactions). We wish to understand the spatial location of chromosomes in dividing cells in order to understand the relationship between chromosome-chromosome interactions and to further investigate the role of chromosomes and their impact on cell biological behavior. In this study, we explored the relative spatial positional relationships of chromosomes [t (9;22) and t (15;17)] in B-ALL cells by using the three-dimensions DNA in situ fluorescent hybridization (3D-FISH) method. The results showed that chromosomes [t (9;22) and t (15;17)] showed relatively stable spatial relationships. The relative stability of the spatial location of chromosomes in dividing cells may be relevant to disease.

Keywords : chromosome, human genetics, chromosome territory, 3D-FISH

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