

**Molecular cytogenetic characterization of a cat mammary tumour:
disclosing candidate genes by *in silico* analysis**

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Animal cancer cytogenetics has been a challenge due to the difficulties involving chromosome preparation and karyotype heterogeneity. Despite the relatively frequent occurrence of mammary tumours in veterinary medicine, particularly in cats (*Felis catus*), cytogenetic banding and *in situ* hybridization data are extremely scarce. The detection of segmental chromosome gains and losses or structural chromosome alterations, such as translocations, amplifications, insertions, and deletions, in different types of mammary tumours will be important for veterinary and comparative tumour research.

In the present work, direct chromosome preparations from a cat mammary tumour were prepared. In order to identify the complex chromosomes rearranged, we used whole chromosome cat paint probes in chromosome painting trials. Several chromosomal rearrangements such as translocations and chromosomal gains were revealed. The databases GARField, Ensembl, and NCBI allowed the disclose mammary tumours candidate genes in the rearranged chromosome regions.

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