



TOPIC: Clinical Cytogenetics

Poster Oral

TITLE: Two New Reciprocal Translocations in sheep (*Ovis aries*, 2n=54)

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TEXT:

The Laticauda is considered an endangered sheep breed and is therefore included in several projects for genetic conservation and product enhancement. In one such project, screening cytogenetic analysis was carried out on phenotypically normal young sheep (*Ovis aries*, OAR, 2n=54,XX), both from the Laticauda breed (15 animals) and Laticauda-Comisana hybrids (5 animals). Several cytogenetic analyses were performed to characterize their karyotypes. First, RBA-banding, CBA-banding and karyotyping analysis investigated the chromosome organization in all animals. Other analyses such as Ag-NORs and FISH-mapping were performed only in specific cases in order to confirm the presence of chromosomal aberrations and regions involved. FISH mapping analyses included different types of probes: two specific BAC-probes in one technique, and the telomere PNA probe in the other. In the course of screening, two new cases of chromosomal translocation were reported in two female animals. One tiny chromosome, later identified as one of two der, emerged in all metaphases of each carrier, suggesting the presence of two reciprocal translocations. Chromosomal translocations were then classified as rcp(4q;12q) and, probably, rcp(18q;23q). The FISH analysis with specific BAC probes to confirm chromosomes involved in the two rcp is still in progress.

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