



**TOPIC: Clinical Cytogenetic**

Poster  Oral

**TITLE: Cytogenetic survey in endangered domestic species reared in southern Italy**

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**TEXT:**

The genetic selection of high-genealogy reproducers has brought about a continuous reduction in both local breed farming and their products. The gene pool of endangered animal breeds is very important because it is the result of integration between genotype and the environment. In the Rural Development Plan (RDP) 2007-2013, Misura 214, e2, project RARECa of Campania (southern Italy) a study is being conducted on the genetic improvement of autochthonous genetic types (AGTs) by various approaches, including cytogenetic breeding selection. In this analysis, in order to typify these animals, peripheral blood lymphocytes were cultured in different ways: normal cultures were treated for CBA-banding to study polymorphic sites; other cultures were treated with late incorporation of 5-BrdU and Hoechst to obtain R-banded karyotypes. Up to now, several animal breeds have been examined. First, 46 Agerolese cattle (*Bos taurus*, 2n = 60) were analyzed, two (4.3%) of which were found to be carriers of rob(1;29). Secondly, 25 horses (*Equus caballus*, 2n = 64), from Napoletana (8) and Salernitana (17) breeds were analyzed and all animals showed normal karyotypes. Furthermore, 25 Laticauda sheep (*Ovis aries*, 2n = 54), of which 5 hybrids Laticauda-Comisana breeds, were examined and two females were found to be carriers of two new reciprocal translocations. Finally, 10 Casertana pigs (*Sus scrofa* 2n = 38) were studied, with all animals showing normal karyotypes.

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