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**THE KOREAN FIELD MOUSE *APODEMUS PENINSULAE* (RODENTIA) AS A MODEL FOR STUDY OF B CHROMOSOME POLYMORPHISM IN MAMMALIA**

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The problem of chromosomal polymorphism occupies the main place in mammalian cytogenetics. Studying of B chromosome polymorphism is very important for understanding the appearance and role of the "extra" DNA in Mammalia.

Here we selected a model object such as *Apodemus peninsulae* Thomas, 1906 (Rodentia) which is a species with complete B chromosome system.

This work is devoted to review of our own and literature data on the study of the B chromosome system in *A. peninsulae* by complex of basic cytogenetic methods of routine and differential (C-, G-, QH-, Ag-NOR and FISH-) staining of chromosomes. Due to these techniques and methods we made a thorough study of karyotypes of animals from entire area of this species. Also we showed the differences between populations from East Siberia and Far East. These distinctions were concerned with the spectra of numerical B chromosomes variability and variety of B chromosome morphotypes and also the patterns of C-, G-, QH-staining (Borisov, 1981; Kartavtseva, Roslik, 2004; Roslik, 2006; Roslik, Kartavtseva, 2009; 2012; Borisov et al., 2010), localization of Ag-NOR-areas on the banded B chromosomes (Rubtsov et al., 2004; Matsubara et al., 2004). According to FISH-staining of B chromosomes in *A. peninsulae* from Siberia and Far East, the differences in the DNA composition have been revealed as well supposed different derivation of the B chromosomes (Rubtsov et al., 2004; 2005; 2009).

In total, each method makes a separate contribution to the analysis of mice karyotypes, making jointly an integrated and comprehensive picture of the B chromosome study. Thus, it appears that all cytogenetic methods and approaches were very relevant in the study of B chromosome polymorphism in Mammalia.

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