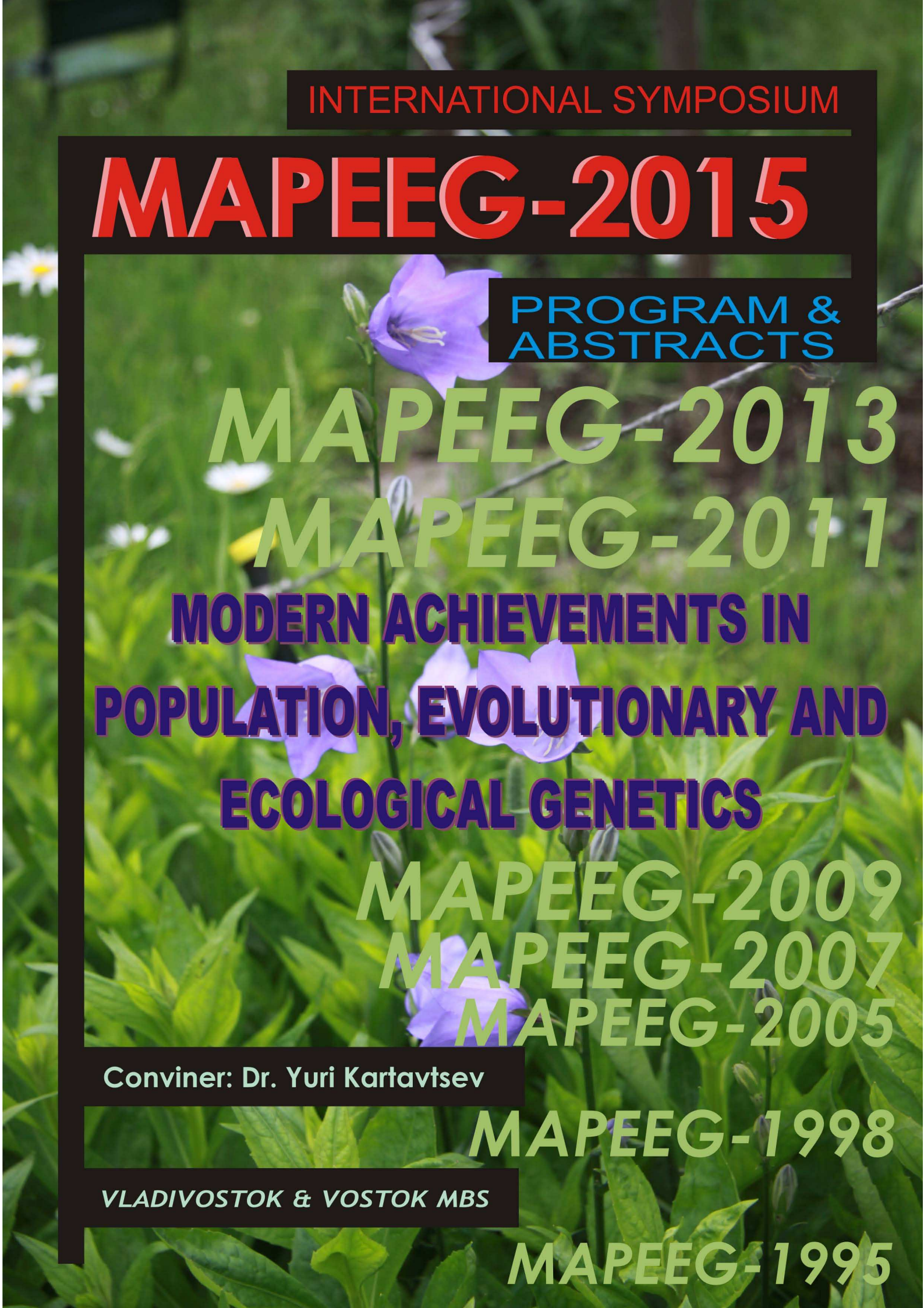

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DIVERSITY OF *APODEMUS PENINSULAE* (RODENTIA) B CHROMOSOMES DNA

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B chromosomes are dispensable components of the genome exhibitingnon-Mendelian inheritance. B chromosomes are additional to standard karyotypes (A) and may vary in size, number and morphology even between cells of the same individual. Korean field mouse (*Apodemus peninsulae*) is a species with high frequency of animals with B-chromosomes, which differ in number, morphology and DNA composition in different geographical regions.

We summarized the literature data on the DNA content of *A. peninsulae* B chromosomes after fluorescent in situ hybridization (FISH) of DNA probes with metaphase chromosomes of the samples from Siberia, Transbaikalia, and the Far East, including Russia, South Korea and Japan (Karamysheva et al, 2002; Trifonov et al., 2002; Matsubara et al., 2004; 2008; Rubtsov et al., 2004; 2005; 2015). DNA library includes microdissection DNA probes from B chromosomes and their regions, as well as from pericentromeric C-positive autosomal regions.

It was shown that B chromosomes and their regions contain various repeated sequences. Several B chromosomes contained active NORs. Repeats that were typical for the weakly condensed regions of macro and micro B chromosomes were detected. DNA composition of micro B chromosomes was different from that of macro B chromosomes. Repeated sequences that were the most typical for B chromosomes, are also presented in A chromosomes. Homology between pericentromeric DNA from B and A chromosomes was revealed. At least one part of the repeats characteristic for the arms of the majority of B chromosomes of species from the Far East are also present as dispersed repeats in C-negative chromosomal regions of the basic set. But some regions were described in several B chromosomes that have no DNA homologous to the repeats in DNA library probes.

We revealed that B chromosomes in population from the Russian Far East and South Korea exhibit low variability in DNA content; however, DNA composition of B chromosomes in populations of Siberia, Transbaikalia and Japan are highly variable. These data open up possibilities to discuss the pathway of origin of *A. peninsulae* B chromosomes in different regions.