

# **IMMUNOPHENOTYPIC CHARACTERISTICS AND CYTOGENETIC ANALYSIS OF MESENCHYMAL STEM CELLS OF BONE MARROW OF HORSE AT EARLY PASSAGES *DURING CULTIVATION IN VITRO***

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***Summary.** Conducted immunocytochemical studies confirm that multipotent stem cells of horse bone marrow during cultivation in vitro in the second passage are heterogeneous. They express markers of mesenchymal, epithelial and hematopoietic cells. At the fifth passage the cell culture becomes a homogeneous immunophenotypic fraction which expresses the markers of mesenchymal origin. However, the results obtained via the cytogenetic analysis of mesenchymal stem cells of horse bone marrow in the third and fourth passages of cultivation indicate that the karyotype variability of these cells corresponds to the spontaneous level, which is typical for this species of animal.*

***Key words:** mesenchymal stem cells, bone marrow, mononuclear cells, monoclonal antibodies, immunocytochemical analysis, nuclear proteins, E-cadherin, N-cadherin, actin, vimentin, cytogenetic analysis, chromosomes, aneuploidy, polyploidy, apoptotic cells.*

