

IMMUNE AND PHENOTYPIC CHARACTERISTIC AND CYTOGENETIC ANALYSIS OF MESENCHYMAL STEM CELLS FROM BONE MARROW HORSE IN EARLY PASSAGES IN VITRO CULTIVATION.

***Mazurkewicz A. J., Maluyk M. O., Bezdyenyezhyh N. O.,
Starodub L. F.***

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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. The purpose of the study. Conduct analysis immunofenotypovyy mesenchymal bone marrow stem cells at early passages horse cultivation using immunohistochemical method, as well as their cytogenetic analysis during cultivation in vitro.

Materials and methods.

Isolation and culturing mesenchymal bone marrow stem cells horses. Multipotent stem cells (MSCs) obtained from bone marrow (KM) horse. The resulting cell mass cultured in standard medium (DMEM - 80% and FBS - 20% of the "Sigma" USA) supplemented with antibiotics-antimycotics in an amount of 10 ml / cm³. Cell culture was performed in CO₂ incubator for t° 37.0 C and CO₂ - 5%. Thus MSCs settled, and attaching rozplastuyuchys at the bottom of Petri dishes. Slurry independent faction blood-forming cells were removed and continued to cultivate cells having adhesive properties. To obtain suspensions of cells that grow attached to cultural Petri dishes, used a mixture of solutions of trypsin and 0.5% EDTA 0.2% [1, 3]. Microscopic analysis of the culture was carried out using inverted microscope Axiovert 40 (Carl Zeiss).