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Bone marrow cells influences for function of rat decidua

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Decidualization of endometrium is obligatory condition for fetus development of man, some monkeys and rodents. Decidua controls the growth of fetuses and progress of pregnancy. The stem cells of DC are not characterized fully. There is demonstration of bone marrow origin of large decidual cells (LDC) and of metrial granulated cells. The precursors of LDC observed under uterine epithelium during rat and human implantation. Decidua is turnover type of cell population. In accord with flow cytometry the proliferative activity of human DC of 1st pregnant trimester is 3.5±0.3%. Before birth the proliferative activity comes down up to 1.6±0.2%. In case of severe preeclampsia the level of proliferating cells decreases up to 0.45±0.2%. Severe pre-eclampsia is also characterized by abnormality of DC DNA content and by DC deficiency that are not compensated by stem cells proliferation. We also observed the influence of rat bone marrow cells (BMC) transplantation on rat fetus development. BMC were prepared from bone marrow of pregnant rats and injected intra vein of pregnant rats of the same date of pregnancy. Fetuses were controlled at 18th day of pregnancy. Transplantation of pregnant rats BMC is not provided by teratogenic effects. Early we had observed that rat BMC transplantation to pseudopregnant rats increased the sizes of decidua. There is increase of size of the fetuses in case of BMC transplantation at implantation (6-9 days of pregnancy) and by retardation of fetuses growth in case of BMC transplantation at placentation (11-12 days of pregnancy).

Biography

Viacheslav M. Mikhailov has completed his Ph.D. at age of 31 years from Mechnikoff Medical University (St.Petersburg) and postdoctoral science from Institute of Cytology RAS at the same city. He is the head of Group of Cell Population Genetics of Dep. of Intracellular Signaling and Transport of Institute of Cytology RAS. He has published more than 75 papers in reputed journals.

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