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Oral Presentations

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Use of menstrual blood driven-mesenchymal stem cells in infertility field

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Mesenchymal stem cells (MSC) are highly important in regenerative medicine because of their inherent regenerative properties. They can be harvested from several adult tissues, such as the bone marrow, umbilical cord, peripheral adipose tissue, placenta, menstrual blood, fluid, and amniotic fluid. They are an excellent source of growth factors/ cytokines. Menstrual blood-mesenchymal stem cells (MB-MSCs) can be isolated from menstrual blood. These

cells have high proliferative, self-renewal, and multiple differentiation potentials. MB-MSCs expressed surface markers CD9, CD29, CD41a, CD44, CD59, CD73, CD90, and CD105; human telomerase reverse transcriptase, etc. It has been demonstrated that MB-MSCs could differentiate into ovarian tissue-like cell and differentiation of MB-MSCs into germ cells.

MB-MSCs were easy to access compared with bonemarrow-MSCs and umbilical-MSCs. Using of HMB-MSC in field of infertility such as POF, endometriosis, and Asherman syndrome has been investigated. Appliance of MSC to treat female infertility such as a Asherman syndrome, endometriosis, premature ovarian failure and poor ovarian responder studied in some article and the researchers believed that MB-MSC might improve infertility in the disease mentioned above by gene expression.