

willingness to public donation of the UCB cells. HLA-A, B and DRB1 were typed for 1454 samples.

Results: The mean volume of the samples was 83 ± 40.7 mL with a range of $14-1200 \times 10^7$ nucleated cells in different samples. The most common HLA alleles were HLA-A*2 (17%) and *24 (15.4%); HLA-B*35 (16.5%) and *51 (13.3%), and HLA-DR*11 (19.6%) and *15 (14.4%). HLA-A*24-B*35-DR*11 (1.9%), HLA-A*02-B*50-DR*07 (1.9%), and HLA-A*02-B*51-DR*11 (1.6%) were the predominant haplotypes.

Conclusion: Based on the broad therapeutic potential of hematopoietic stem cells (HSCs) and mesenchymal stem cells (MSCs), UCB can be considered the main source of different stem cells for cell-based therapy against various disorders. Based on HLA-DRB1 profiles, the current public Royan UCB bank can potentially be considered a proper resource for HSCs transplantation for Iranian recipients from Parsees and Zoroastrians. Regular educational programs for improving public knowledge about UCB advantages in transplantation can be effective to enrich this source as cover all Iranian ethnic groups in near future.

Key words: Stem cell transplantation, Umbilical cord blood, HLA.

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Inflammatory infertility in rats treated chronically with L-arginine

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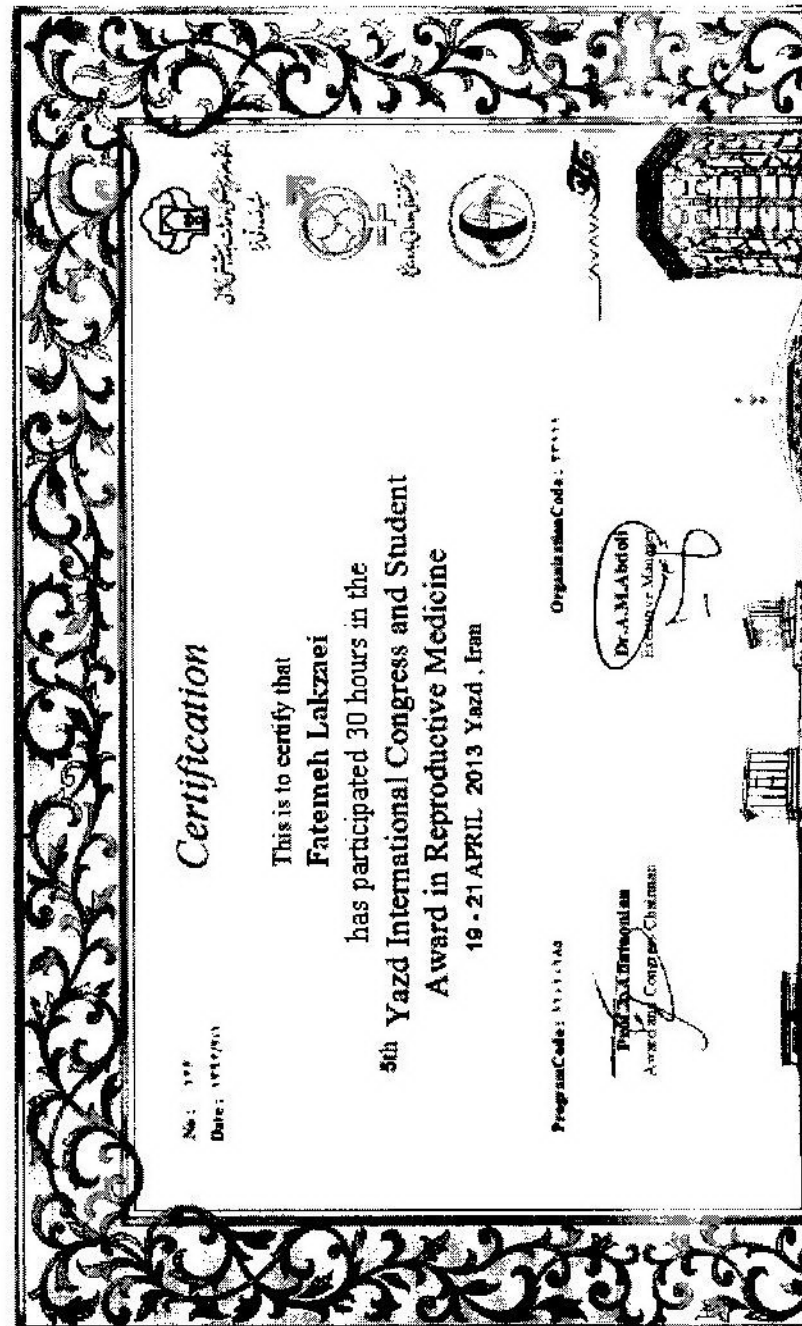
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Introduction: About 15 percent of married couples over the world suffer from infertility during breeding phase. Inflammatory events reason for a high percent of infertile women. This research discusses the occurrence of infertility in female rats treated L-arginine as a precursor of pro-inflammatory nitric oxide (NO).

Materials and Methods: The animals were female Wistar rats weighing 200-250g at the start of the experiments. They were kept as virgin to sustain them under the Diestrous phase of sexual cycle. The animals were intra-peritoneally (i.p.) injected the precursor of NO, L-arginine (50 mg/kg), throughout 9 days/ once a day. Another group of the rats were administered (i.p.) single anti-inflammatory naloxone (0.4 mg/kg, 9 days /once a day). The third group received naloxone (0.4 mg/kg, i.p.) 30 min priorly to the L-arginine (50 mg/kg). The control group solely received saline (1 ml/kg, i.p.) throughout the treatment period. After completion of the treatments, all rats were coupled with intact males. The females following observation of vaginal plaques were isolated and graded 0 of gestation. The females were

subsequently examined surgically in days 19-20 of gestation.

Results: Based on the fetus count result the L-arginine



long insemination were investigated regarding fertilization and creation of male and female pronucleus (2PN) using an invert microscope. Then, in the second and the third days, the embryos were evaluated regarding the quality and number of blastomeres and fragmentation.