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Analysis of viability of stromal cell from bovine endometrial tissue cryopreserved with different mediums

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The aim of this study was to evaluate the effects of cryopreservation of stromal cells (SC) from bovine endometrial tissue in two moments of luteal phase, using two mediums. For this, in the slaughter house samples of endometrial tissue of animals in phase II (n=3) and III (n=3) were collected and processed at the laboratory. SC were isolated and cultured with DMEM high glucose: F12 (1:1), 10% fetal bovine serum (FBS), 1% penicillin / streptomycin, and 1.2% amphotericin B at 37.5 ºC in a humidified atmosphere, containing 5% CO2 in air. In the third passage SC were cryopreserved using Mr Frosty (-1ºC/minute until -80ºC, 24 hours, Nalgene®) with the following medium: Medium 1 (M1): 90% SFB+DMSO, penicilin/streptomycin (10 µL/mL) and anphotericin B (3 µg/mL); Medium 2:90% conditioned medium (culture medium)+10% DMSO. After one month storage in liquid nitrogen, samples were thawed and analyzed on flow cytometry using annexin V APC (AN) and propidium iodide (PI). Data were analyzed using t-test or Mann-Whitney Rank Sum Test according to the normality, taking $P<0.05$ as significant. The viability (PI- AN-) after cryopreservation didn´t differ ($P=0.52$) between M1 (74.88%) and M2 (70.02%). The rate of necrosis was considered low in both groups with lower ($P=0.015$) values at M2 (1.75% versus 3.22). The rates of late-apoptosis+necrosis (PI+AN+) and initial apoptosis (PI+AN-) didn't differ ($P>0.05$) between protocols. It can be concluded that the two mediums are suitable for cryopreservation, especially M2 which is commonly discarded and has a lower proportion of SFB.

Biography

Carolina Nogueira de Moraes Completed the graduation in 2009 by the Northern State University of Paraná, Bandeirantes, PR. Participated of the Medical Residency in Animal Reproduction, at São Paulo State University, Botucatu, SP, from 2011 to 2012. In addition, completed the Master Degree in Animal Biotechnology in 2014, and at the same institution and department currently is Doctoral student.

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