

Title of Article: Virification of Sheep Oocytes using Propylene Glycol and its Effects on the Viability and Fertilizability and Chromosome Patterns

Authors: Dike, I. P and Paliniswamy S.

Outlet: International Journal of Current Research, 33 (4), pp.069-073.

Date:

Abstract

Analysis of the effect of vitrification using propylene glycol on the post-thaw survival, fertilizability and chromosomal arrangement was conducted. The survival rate and the fertilization rate were assessed in frozen-thawed sheep oocytes after various storage durations employing propylene glycol as the cryoprotectant. The frequencies of chromosomal aberrations in the fertilized embryos were also assessed at various storage durations. Sheep oocytes collected from the local abattoir were vitrified in propylene glycol (5M PROH+1.5M Sucrose) using the standard technique. The oocytes were frozen for the following storage durations 24 hours, 1week and 2 weeks and were thawed and studied for their viability and fertilizability. After fertilization the intact embryos were transferred to fresh medium containing colcemid and were fixed after 48 hours. The embryos were then studied for chromosome abnormalities using Tarkowsky's drying technique. From the results it was evident that vitrification affects the viability, fertilizability and chromosome structure of the oocytes, when compared with the control group. Furthermore increasing the storage duration reduces the viability and increases the chromosome aberrations in the cells.