

**CYTOCHROME C EXPRESSION AND CASPASE 9 EXPRESSION
ON GOAT OOCYTE AFTER VITRIFICATION WITH
SUPPLEMENTATION *INSULIN TRANSFERRIN
SELENIUM AND HEAT SHOCK PROTEIN 70*
IN CRYOPROTECTANT**

Angga Pratomo Cahyadi

ABSTRACT

This research aims to know the potency of the combination Insulin Transferrin Selenium (ITS) and Heat Shock Protein 70 (HSP70) as a supplement of vitrification medium. Ovarium was collected from slaughter house and oocyte was collected by aspirated using 18G needle from follicle. The classification of oocyte quality was performing, then oocytes with compact cumulus and the cytoplasm homogenized was matured in vitro. As many as 40 oocytes were divided into four treatment groups. Group 1 as control (PBS + (EG30% + Sucrose 1M), Group 2 (PBS + (EG30% + ITS15 μ g/ml) + Sucrose 1M), Group 3 (PBS + (EG30% + HSP70 0,5 μ g/ml) + Sucrose 1M), Group 4 (PBS + (EG30% + ITS15 μ g/ml + HSP70 0,5 μ g/ml) + Sucrose 1M). Vitrification used modified method. A Pasteur pipette was pulled in a flame and cut in half to get a suitable internal diameter about 125 μ m. Oocytes were plunged to the vitrification medium, then oocyte were loaded into hemistraw. Furthermore hemistraw dipped in liquid nitrogen and put in a large straw. Then the large straw fixed on each tips and inserted into the cassette straw. Furthermore cassette was inserted in container goblet of liquid nitrogen. For warming, oocytes were transferred to diluent solution with the gradual concentration of sucrose, oocytes dropped into 1M sucrose for 2 minutes, and then transferred to 0,5M sucrose for 2 minutes, and then transferred to 0,25M sucrose for 2 minutes, then transferred to PBS liquid for 2 minutes. In conclusion of Insulin Transferrin Selenium (ITS) supplementation and combination using Insulin Transferrin Selenium (ITS) and Heat Shock Protein 70 (HSP70) in vitrification medium can suppress cytochrome c expression and caspase 9 expression of goat oocyte.

Keywords : Oocyte, Vitrification, *Insulin Transferrin Selenium, Heat Shock Protein 70, Cytochrome C, Caspase 9.*