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CRYOPRESERVATION RESISTANCE OF RABBIT SPERM WITH DILUENTS ENRICHED WITH *Chenopodium Ambrosioides*

GUADARRAMA VALDEZ I. I., VELÁZQUEZ CASTAÑEDA S., GUTIÉRREZ DE HONOR A., CANO TORRES R, FELIPE-PÉREZ Y.E.*

Departamento de Reproducción Animal, Facultad de Medicina Veterinaria y Zootecnia
Universidad Autónoma del Estado de México, Campus El Cerrillo, Toluca Estado de México. C.P. 50200
**Corresponding author: yazminyefp@yahoo.com*

ABSTRACT

There is a great diversity of cryopreservation diluents for semen of different animal species. The most common include different agents that act as cryoprotectors, antibiotics, nutrients which may be used as fuel for sperm energy and the latest research have been trying to avoid damage by including different anti-oxidants. Many studies have included vegetable extracts from species, with good results. Therefore, the aim of this study was to evaluate the effect of the addition of 10% aqueous solution C*henopodium ambrosioides* to the rabbit sperm diluents, on the sperm viability and plasma membrane response, before and after undergoing cryopreservation. Semen samples were obtained from 3 sexually active New Zealand males, with an artificial vagina, semen samples were pooled and routine evaluation was performed in fresh samples as well as after freezing-thawing. Viability was evaluated by using eosin-nigrosin staining; plasma membrane response was evaluated by HOST, from time 0, 30 and 60 min in fresh and frozen-thawed samples. Paired T-student test was applied to analyze results. Although, no statistical differences were observed between diluents with or without the addition of C*henopodium ambrosioides* extract ($P>0.05$), there was a slight tendency to obtained higher viability and HOST positive percentages on the samples enriched with the vegetable extracts. In conclusion, the addition of C*henopodium ambrosioides* extract should be further studied, in order to find the best concentration to induce a positive antioxidant effect on semen rabbit diluents for cryopreservation.

Keywords: rabbit semen cryopreservation, antioxidants, C*henopodium ambrosioides,* viability, sperm plasma membrane response.