



#### KEY WORDS

- ✓ Royal Jelly
- ✓ English Bulldog
- ✓ Cryoprotectant
- ✓ Tris
- ✓ Egg Yolk

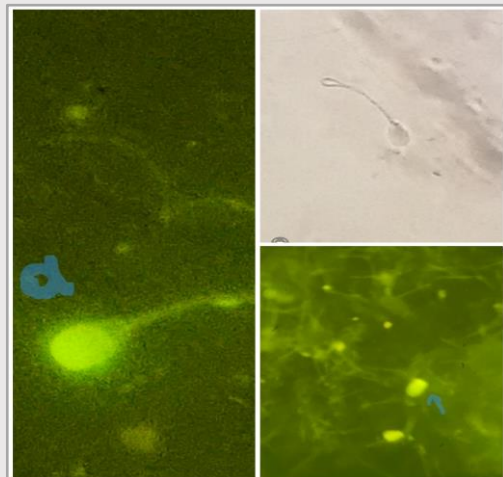
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## In Vitro Evaluation Of Dog Semen Frozen With Diluents Containing Different Ratios Of Royal Jelly (Bee Milk)

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#### THESIS ABSTRACT

In the presented study, the effects of royal jelly (RJ) with antimicrobial, antioxidant, and positive fertility effects were investigated to protect against cell damage during cryopreservation of English Bulldog breed dog sperm and to prevent oxidative stress. In our study, semen was collected five times at different intervals from 10 different English Bulldog breed dogs in the light of spermatological evaluation. Plasma membrane integrity tests were performed on the collected fresh spermatozoa, and motility values were examined. Subsequently, five groups, one of which was a control and the others contained 1 %, 2 %, 4 %, and 8 % RJ, were frozen using a tris-based egg yolk extender. After waiting for at least 24 hours, the motility, plasma membrane integrity, DNA integrity, and acrosomal damage of thawed spermatozoa were examined.

#### APPLICATION AREAS OF THE THESIS RESULTS

It is thought that the genetic material of English Bulldog dogs can be preserved for long years without leaving the direction, spermatozoa collected from dogs with maximum fertility and superior spermatological qualities can be stored under optimum conditions by freezing with the most suitable diluents and as a result of this situation, the breed characteristics of English Bulldog dogs can be preserved.

#### ACADEMIC ACTIVITIES

Alçay, S., Çakmak, S., Çakmak, İ., **Mülkpınar, E.**, Toker, M. B., Üstüner, B., Şen, H., Nur, Z. (2019). Drone Semen Cryopreservation with Protein Supplemented TL-Hepes Based Extender. 25 (4), 553-557. DOI: 10.9775/kvfd.2018.21311  
Alçay, S., Çakmak, S., Çakmak, İ., **Mülkpınar, E.**, Gökçe, E., Ustuner, B., Sen, H., Nur, Z. (2019). Successful cryopreservation of honey bee drone spermatozoa with royal jelly supplemented extenders. *Cryobiology*, 87, 28-31. Doi: 10.1016/j.cryobiol.2019.03.005