



## KEY WORDS

- ✓ MARE
- ✓ AMH
- ✓ AGE
- ✓ ESTRUS CYCLE PHASE
- ✓ FOLLICLE
- ✓ FERTILITY

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# BETWEEN SERUM AND AMH LEVELS DURING DIFFERENT STAGES OF THE ESTRUS CYCLE AND FERTILITY IN THOROUGHBRED MARES

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GRADUATION DATE:12.02.2026

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## THESIS ABSTRACT

In this study, the relationship between serum Anti-Müllerian hormone (AMH) levels and age, estrous cycle stage, follicle diameter, and fertility was investigated in Thoroughbred mares. Results showed that AMH is largely independent of the cycle stage, decreases with age, and is associated with larger follicle diameter. Although AMH alone is insufficient to determine fertility, it may help predict infertility when evaluated together with age and follicle diameter.

## APPLICATION AREAS OF THE THESIS RESULTS

This study evaluated serum AMH levels in mares in relation to age, follicle diameter, and fertility. AMH was largely independent of the estrous cycle, decreased with age, and high levels were associated with larger follicles. While AMH alone is insufficient to predict fertility, combined with age and follicle size, it can accurately predict infertility (AUC=0.83).

## ACADEMIC ACTIVITIES

1. Alcay, S., Aktar, A., Koca, D., Kilic, M. A., Akkasoglu, M., & Sagirkaya, H. (2021). Positive effect of autologous platelet-rich plasma on semen cryopreservation of Saanen bucks during the non-breeding season. *Cryobiology*, 103, 45-48..
2. Alcay S, Aktar A, Koca D, Kilic MA, Akkasoglu M, Yilmaz MM, Sagirkaya H: Autologous platelet rich plasma have positive effect on ram spermatozoa during cryopreservation in non-breeding season. *Kafkas Univ Vet Fak Derg*, 28 (2): 229-234, 2022. DOI: 10.9775/kvfd.2021.26763..