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## Effect of season, age and gender on some haematological, serum and cortisol parameters in Shetland ponies in east provision, Saudi Arabia

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The Shetland ponies are now most popular pony breed distributed in almost every corner of the world, which originates from harshest environments in the world islands in the north of the Atlantic Ocean. Reference ranges of physiological, biochemical and haematological values are widely used in veterinary clinics and its values may differ according many factors like breed, age, sex, type of feeding, season and environmental circumstances of the area, where the animal lives. The study was conducted between December 2016 to June 2017 on Ponies in and around Al-Hasa, Saudi Arabia. Twenty-three clinically healthy ponies males and females of different ages were included for haematological and biochemical analysis in this study. Blood samples were collected in summer and winter. Four physiological, fourteen haematological, sixteen biochemical and serum cortisol were analyzed. The heart rate, respiratory rate, pulse and rectal temperature were increased in summer comparison to winter. The results of blood haematology and biochemistry of the ponies revealed that there was no significant variation between summer and winter in most of the haematological and biochemical parameters, while there was slight significant deference in leucocyte counts, monocyte, MCH, platelets, MPV, AST and K<sup>+</sup>. There was a significant difference in serum cortisol concentration regarding season and age but no significant variation was regarding gender.

### Recent Publications

1. Brinkmann L, Gerken M and Riek A (2013) Seasonal changes of total body water and water intake in Shetland ponies measured by an isotope dilution technique. *Journal of Animal Science* 91:3750-3758.
2. Dekic R, Ivanc D, Cetkovic D, Dolicanin Z and Obradovic S (2013) Hematology of Bosnian pony. *Bulgarian Journal of Agricultural Science* 20:1237-1244.
3. Nilssen K J, Bye K, Sundsfjord J A and Blix A S (1985) Seasonal changes in T3, FT4, and cortisol in free-ranging Svalbard reindeer (*Rangifer tarandus platyrhynchus*). *General and Comparative Endocrinology* 59:210-213.
4. Shawaf T (2017) Some haematological and serum biochemical parameters in apparently clinically healthy hassawi donkey. *Alexandria Journal of Veterinary Sciences* 1:125-130.

### Biography

Al-Zoubi M is studying and working at Department of Clinical Studies, College of Veterinary Medicine, King Faisal University, Saudi Arabia. His interest includes various programs, contributions and participation in different events for diverse fields of study.

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