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## Investigations of the safety of tildipirosin in sheep

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Tildipirosin has a 16-membered ring, has tribasic properties, and is a semi-synthetic macrolide antibiotic. Determination of tildipirosin safety is aimed at the single treatments of 4 mg/kg or 8 mg/kg via subcutaneous injection. In the current research, 12 healthy sheep were divided randomly into two equal groups. Tildipirosin (SC, single treatment) was applied at 4 mg/kg in the first group (n=6) and 8 mg/kg in the second group (n=6). Before (0 day as control) and after the treatments, at 0.25, 0.5, 1, 3, 5, 10, and 21 days, blood samples were obtained. Hematology parameters (RBC, WBC, PLT, etc.), biochemical markers (CK-MB, troponin I, ALT, AST, GGT, etc.), and an oxidative stress marker (TBARS) were determined in the collected blood samples. Tildipirosin caused statistically significant increases in the blood urea nitrogen (BUN) and creatinine levels in both groups. The direct and indirect cardiac damage parameters (troponin I, CK-MB mass, LDH) and TBARS level increased however it not statistically significant in the first 24 hours. Liver biochemistry and hematology did not show statistically significant changes in any parameter. In conclusion, tildipirosin treatment has no significant hepatotoxic effects in both doses but can cause oxidative stress, cardiac and renal damage.

## Biography

Burak Dik has done his PhD education from Selcuk University in 2015. He works as a Research Assistant in Selcuk University, Faculty of Veterinary Medicine. He has published more than 18 papers in reputed journals.

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