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### Extracellular traps formation of sheep and cattle polymorph nuclear neutrophils against *Toxoplasma gondii*

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*Toxoplasma gondii* is a zoonotic parasite possesses broad hosts range. Sheep is easily infected with *T. gondii* and the parasite causes some important pathology dependent on the stage of pregnancy at which the ewe becomes infected; whereas cattle is poor host of the parasite epidemiologically, cattle can be successfully infected with *T. gondii*, but this parasite is eliminated perhaps due to innate immunity. Innate immune system providing a quick defense against to pathogens enters the body is essential for survivor of multicellular organisms. Primary role of innate immune system is restrict pathogens in infections area and thus prevent to spread into the organism. Innate immunity is a complex mechanism involving several instruments. Neutrophil is major component of innate immune system and fight pathogens with different strategies in organism. One of them, Netosis is an important effector mechanism of the host early immune response against pathogens. The aim of the study was to comparison of neutrophil extracellular traps (NETs) formation of polymorph nuclear neutrophils (PMN) of cattle and sheep confronted with *T. gondii* tachyzoites. And also aim to determine the effects of incubation time and different parasites ratio on NETs development in cattle and sheep PMN. Sheep and cattle experiments were started at the same day under the same experimental conditions. NETosis was observed in cattle and sheep PMN after confronted with *T. gondii* tachyzoites *in vitro*. NETs amount was measured using fluorometer. NETs amount increased depending on tachyzoites intensity and incubation time. Fluorescence microscopic analyses revealed that myeloperoxidase, neutrophil elastase and histones (H3) were detected in NETs structures from sheep and cattle PMN after encounter with *T. gondii*.

#### Biography

Kader Yildiz has completed her PhD studies from Ankara University, Turkey.

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