

## **Boer goats appear to lack a functional IgA and eosinophil response against natural nematode infection**

### **ABSTRACT**

Gastrointestinal nematode infection is one of the major diseases affecting small ruminants. Although some breeds of goats are quite resistant, many breeds of goats are relatively susceptible. This study used a combined parasitological, immunological, bioinformatic and statistical approach to examine the role of goat IgA and eosinophils in protection against *Teladorsagia circumcincta*. Molecular modelling suggested that the transmembrane domain of the high affinity IgA receptor was dysfunctional in goats. Statistical analyses failed to find any association in naturally infected goats between high IgA or eosinophil responses and low faecal egg counts. Together these results indicate that IgA and eosinophil responses against *T. circumcincta* are less effective in goats than sheep.

**Keyword:** Sheep; Nematode; *Teladorsagia circumcincta*; Immune response; IgA; Eosinophil