

# A Comprehensive Study of the Acute Phase Response in Ruminant Parasite Blood Disorders

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Ruminant parasite blood disorders pose significant challenges to livestock health and productivity. These disorders are often characterized by the presence of blood-borne parasites that interfere with normal physiological functions in ruminants, leading to a range of clinical symptoms. One key aspect of the host's response to these infections is the acute phase response (APR), a complex and coordinated reaction involving changes in the levels of various blood proteins. Understanding the acute phase response in ruminant parasite blood disorders is crucial for developing effective diagnostic and therapeutic strategies [1].

## The acute phase response

The acute phase response is a well-orchestrated, immediate, and non-specific physiological reaction that occurs in response to infection, inflammation, trauma, or stress. It involves changes in the concentration of certain blood proteins known as acute-phase proteins (APPs). These proteins play essential roles in the host's defense mechanisms, including inflammation regulation, immune system modulation, and tissue repair.

## APRS in ruminant parasite blood disorders

In the context of ruminant parasite blood disorders, the acute phase response is a dynamic process influenced by the host-parasite interaction. The presence of blood-borne parasites triggers a cascade of events that lead to alterations in the concentrations of specific acute-phase proteins. These proteins can serve as biomarkers for the severity and progression of the parasitic infection.

## Key acute phase proteins in ruminants

**C-reactive protein (CRP):** CRP is a well-known acute-phase protein that increases rapidly in response to inflammation. In ruminants with parasite blood disorders, elevated levels of CRP can indicate the severity

### Conflict of Interest

None

### Acknowledgment

None

### References

1. Migibe A, Minota K, Gezahegn S (2017) Traditional Beef Cattle Fattening System in Melo Koza Woreda Gamo Gofa Zone, Ethiopia
2. Guyo DA (2016) of Concentrate Supplementation with Locally Available Feeds on Fattening Southern Region. Hawassa University, Hawassa, Ethiopia.
3. Beta AM, Basore BA, Boro HH (2018) Assessment on challenges, opportunities and associated health problems of Beef Cattle production systems in Hawassa, Southern Ethiopia
4. Gobena MM (2017) Beef cattle production systems, marketing and constraints in Ethiopia. J Mar Cons Res 32: 1-7.
5. Marketing System in Bure Woreda, Amhara Region. M.Sc. Thesis, Mekelle University, Mekelle, Ethiopia.
6. Milkias M (2017) Beef Cattle Production Systems, Marketing and Constraints in Ethiopia. J Mark Cons Res.
7. Ahmed K, Tamir B, Mengistu A (2016) Challenges of Cattle Fattening Practices in Urban and Peri-Urban Kebeles of Dessie Town, Ethiopia
8. Assessment of constraints and opportunities in small-scale beef cattle fattening business: Evidence from the West Hararghe Zone of Ethiopia.