



Poster

---

## Detection of humoral and cellular immunity on *b. abortus* s19 vaccinated cows with conjunctival route and monitoring of the immune response

**Glnur Serdar, Oktay Gen**

Samsun Veterinary Control Institute, 55200, Atakum, Samsun, Turkey , Department of Microbiology, Faculty of Veterinary Medicine, Ondokuz Mayıs University, Kurupelit, 55200, Samsun, Turkey

---

### Abstract

Brucellosis is a contagious, chronic, necrotic and inflammatory disease that causes abortion and infertility in animals such as cattle, sheep, goats, rams, pigs and dogs, especially by localizing in genital organs such as testicles, breasts and uterus. As it is known, Brucella agents are intracellular and immune response development is both humoral and cellular. The main cytokine that causes cellular immune response stimulation is interferon gamma (IFN gamma). Lipopolysaccharide (LPS) and oligopolysaccharide (OPS) are widely used as diagnostic antigens in serological tests. For use in this study, blood was collected from 60 cattle conjunctivally vaccinated with *B. abortus* S-19. Blood was collected from 30 calves (3-5 months old) who were vaccinated for the first time before vaccination and on the 46th, 85th and 169th days following vaccination to obtain serum and plasma. Blood was collected from 30 cattle vaccinated a year ago, aged 15-17 months, before the second vaccination and on the 46th, 85th and 169th days following the second vaccination. While the data obtained as a result of the study show that the humoral immune response based on the antigens used for vaccine follow-up is not sufficient for long-term follow-up of immunity, the detection of IgG response at the rate of 100% in young people and 96.6% in adults on the 46th day indicates that the first 46-day period of the study may be important in terms of monitoring immunity. In the study, it was determined that the IFN $\gamma$  results were not significant between the groups in terms of monitoring the immune response.

**Keywords:** brucellosis, immune response, vaccine

---

**Corresponding Author:** Glnur SERDAR

**E-mail:** g\_atalar@hotmail.com