



KEY WORDS

- ✓ Neonatal calf diarrhea
- ✓ Bovine Rotavirus
- ✓ Bovine Coronavirus
- ✓ ELISA
- ✓ PCR

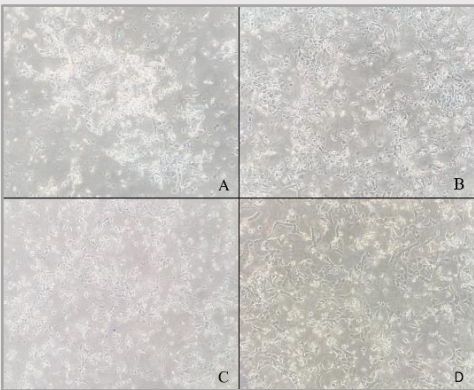
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Detection and characterization of Bovine Rotavirus (BRV) and Bovine Coronavirus (BCoV) from calf diarrhea cases

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THESIS ABSTRACT

Calf diarrhea, which is the most important cause of mortality in the neonatal period, develops depending on many factors and causes economic losses in businesses.

In the thesis study, 69 (32.39%) of 213 stool samples with diarrhea were found positive for BRV and 17 (7.98%) were positive for BCoV. Two field isolates (RV-36 and RV-38) were successfully isolated in the MA-104 cell line. Of the 69 stool samples detected positive with the BRV antigen ELISA kit, 54 were detected positive for BRV by the RT-PCR method, and 14 of the 17 stool samples were detected positive for BCoV by the Nested-PCR method. Among the 69 stool samples, it was determined that although the G6 genotype was higher among the genotypes intended to be detected, it was not a clearly dominant genotype, and among the P genotypes, P[5] and P[11] genotypes were observed at levels close to each other. As a result of the detected BRV genotype combinations, the dominant genotype was determined to be G10P[11]. In the study, it was shown that BRV segments in 69 stool samples were arranged as 4/2/3/2 on polyacrylamide gel.

APPLICATION AREAS OF THE THESIS RESULTS

This thesis study was supported by Bursa Uludağ University Scientific Research Projects Coordination Unit (BUÜ-BAP) within the scope of project number DDP(V)-2020/12. With the sampling study conducted in different provinces of Turkey, the prevalence of BRV and BCoV, which are important viral factors that can cause calf diarrhea, has been determined and it has been shown that they may cause losses in enterprises.

ACADEMIC ACTIVITIES

- Ates, O., & Yesilbag, K. (2023). Characterization of bovine rotavirus isolates from diarrheic calves in Türkiye. *Molecular Biology Reports*, 50(4), 3063–3071. <https://doi.org/10.1007/s11033-022-08169-4>
- Ateş, Ö., & Yeşilbağ, K. (2022b). Yenidoğan buzağı ishal olgularında enterik virüslerin (BRV, BCoV, BVDV, BToV) çoklu enfeksiyonu. *Journal of Research in Veterinary Medicine*, 41(2), 0–0. <https://doi.org/10.30782/jrv.m.1166863>