reaction was performed as described by others (Extramania et al. 2002; Grego et al.,2007).

Samples found positive by PCR were subjected to sequencing and phylogenetic analyses. Products obtained by PCR using the LTR and gag gene primers were sequenced by a commercial company (REFGEN, Turkey). Multiple alignments of LTR and gag gene sequences were made by using the Clustal W program (Geneious 6.1). Phylogenetic analyses were carried out by using the criterion of neighbor-joining trees based on genetic distance model Tamura-Nei principle.

Results: In total, 4 samples (lungs of 3 sheep and lung of 1 goat) were found to be positive by PCR. Tree sheep samples were found to be positive by LTR gene primers sets. Two sheep and one goat were found to be positive by gag gene primers sets. A phylogenetic tree generated by using the sequences of LTR and gag gene showed that SRLV detected in 2 sheep lungs were clustered in subtype A while SRLV found in one sheep and one goat lung were clustered in subtype B1.

A large quantity of foamy fluid was present in the trachea and in the cut sections of the lungs. Intestinal hyperaemia was observed and the intestinal content was quite watery. There were areas of emphysema and hepatization in the lungs. On histopathology, infiltration of mononuclear cells localized around bronchioles and vesicular emphysema on alveoli and smooth muscle hyperplasia within the alveoli were observed.

Conclusion: The primary results on the detection and presence of SRLV in lung and brain samples in Marmara region shows that the circulating subtype in sheep and goat is found to be B1 and A in the gag region phylogenetic classification. Generally genotype B was reported in goats but in this study one sheep partial gag sequence was identified as subtype B1. The collection of samples, detection and sequencing studies are still going on.

Immunization of Day-Old Chickens with Recombinant Viruses Expressing Chicken Parvovirus VP2 Protein

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Objective: To determine the efficacy of immunization with baculovirus or Newcastle disease virus recombinants expressing chicken parvovirus (ChPV) VP2 protein against challenge inoculation with ChPV ABU-P1 strain in day old chickens.

Methods: A baculovirus (BV) recombinant and a Newcastle disease virus (NDV) recombinant were constructed using the standard BV expression vector and a lentogenic NDV vaccine strain, PHY- LMV-42 inserting the VP2 protein of the chicken parvovirus (ChPV) ABU-P1 strain. Expression of the VP2 was confirmed by immunofluorescence staining in virus infected cell cultures with rabbit antipeptide VP2 antiserum. Day-old broiler chickens were inoculated orally with the BV-VP2 or NDV-VP2 and challenged orally three days later with the pathogenic ChPV ABU-P1 strain. Cloacal swab samples and small intestines were taken at 4, 7, and 14 days post challenge and parvovirus shedding was determined using a chicken parvovirus-specific quantitative real-time PCR (qRT-PCR) assay.

Results: The recombinant virus NDV-VP2 exhibited similar growth characteristics in vitro and pathogenicity in chickens when compared to the parental NDV. Both the BV-VP2 and NDV-VP2 recombinants demonstrated a strong expression of the ChPV-VP2 protein in virus infected Sf9 or VERO cells, respectively. The qRT-PCR data showed that ChPV shedding was significantly reduced in birds that were immunized with BV-VP2 or NDV-VP2 when virus content of cloacal swabs or small intestines were compared to those collected from PBS inoculated and challenged birds.

Conclusion: These results suggest that immunization of day-old broilers with recombinant viruses expressing ChPV VP2 protein may induce a host response that results in decreased parvovirus replication in the intestinal tract and could potentially lead to less severe ChPV-induced enteric disease.