In the future, T-cell and B-cell epitope identification in SVL Prion Disease with SVNV: An Epitope-Based Vaccine Design against Bovine Scrapie

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Bovine scrapie is a highly contagious disease that causes a wasting condition in cattle. The disease is caused by a prion protein that aggregates into amyloid plaques in the brain, leading to the death of the infected animal. The disease is transmitted through direct contact with infected animals or through the environment.

The development of an effective vaccine for bovine scrapie is crucial for the prevention and control of the disease. The current approaches to develop vaccines for scrapie include various strategies such as the use of inactivated or attenuated viruses, the use of recombinant proteins, and the use of synthetic peptides.

The goal of this study was to identify potential epitopes in the scrapie protein that could be used as vaccine candidates. The study used computational methods to identify the antigenic epitopes that could be targeted by the immune system.

The results of the study showed that the identified epitopes could be used as vaccine candidates for the prevention of bovine scrapie. The study also suggested that the vaccine candidates could be used in combination to provide a more effective immune response.

Keywords: Bovine scrapie, Prion disease, Epitope-based vaccine, Immunology.