

## **Modulation of protease activity to enhance the recovery of recombinant nucleocapsid protein of Nipah virus**

### **ABSTRACT**

The nucleocapsid (N) protein of Nipah virus (NiV) expressed in *Escherichia coli* (*E. coli*) is antigenic and immunogenic. A method to enhance the recovery of recombinant N protein of NiV produced in *E. coli* is described. A bioinformatics tool, PeptideCutter was used to identify potential protease and cleavage sites from the amino acid sequences deduced from the published DNA sequence of the N protein of NiV. The size of degraded protein was estimated by using the Western blot and PeptideCutter analyse. The identified proteases were serine proteases, hence, a range of serine protease inhibitors were tested to improve the recovery of the N protein. The relative amount of N protein of NiV was 2-fold higher with the addition of PMSF, compared to the control sample (without any protease inhibitor supplementation).

**Keyword:** Endogenous protease, Protease inhibitor, Nucleocapsid protein, Nipah virus, *Escherichia coli*