SUPPLEMENTARY MATERIALS

- **File S1** Function of identified proteins and MEROPS annotation with taxonomy based on metagenome (uploaded as excel)
- **Fig.S1** Rarefaction curves of Shannon's diversity index for raw milk samples collected from dairy farm A and dairy farm B.
- Fig.S2 Principal coordinates analysis (PCoA) of the bacterial community structure from raw milk samples collected from dairy farm A and dairy farm B
- **Fig.S3** Metaproteomics data. a) Analysis of the bacterial proteins in raw milk samples obtained from dairy farm A and dairy farm B using PCA, showcasing the distinct division between the two groups based on the identified proteins. b) The number of proteins identified in raw milk samples from dairy farm A and dairy farm B through a Venn diagram.

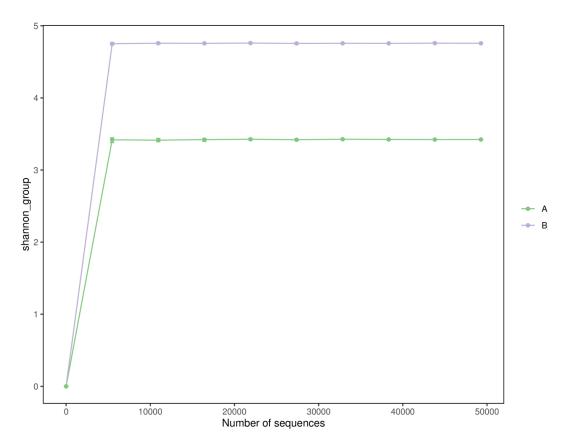


Fig.S1

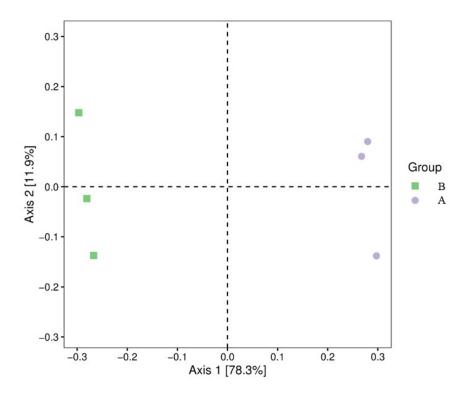


Fig. S2

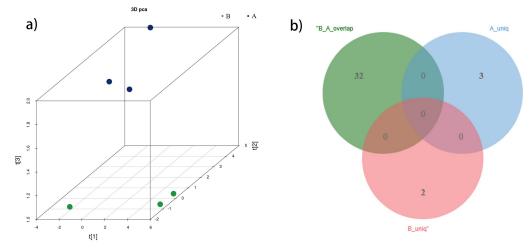


Fig.S3