Bovine *Mannheimia haemolytica* Genotyping

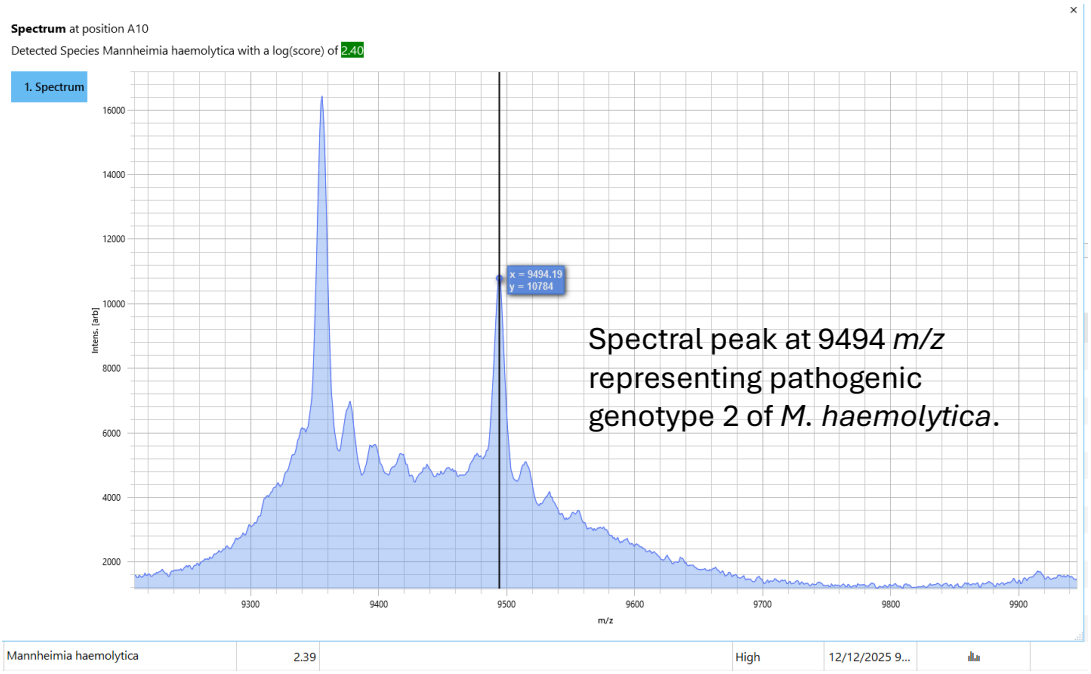
Method:

M. haemolytica is genotyped by matrix-assisted laser desorption ionization time-of-flight mass spectrometry (MALDI-TOF MS). Biomarkers distinguishing genotypes 1 or 2 are reviewed from protein spectra obtained during routine identification of *M. haemolytica* by MALDI-TOF MS. Presence or absence of these peaks are used to identify the isolate as either genotype 1 or genotype 2.

M. haemolytica Genotypes

Genotype 1 – commonly present as normal commensal flora of the bovine nasopharynx, not likely a concern for herd management. Antimicrobial susceptibility testing (AST) is **not** routinely performed.

Genotype 2 – a pathogenic strain associated with bovine respiratory disease. AST routinely performed.



Peak masses published in Loy-Clawson Study:

Loy, J. D., & Clawson, M. L. (2017). Rapid typing of *Mannheimia haemolytica* major genotypes 1 and 2 using MALDI-TOF mass spectrometry. Journal of Microbiological Methods, 136, 30–33.

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