The Texas A&M Veterinary Medical Diagnostic Laboratory (TVMDL) in College Station invested in new equipment that will improve laboratory efficiency and accuracy. The bacteriology section is in the first stages of transitioning routine bacterial identification to the Matrix-Assisted Laser Desorption Ionization-Time of Flight Mass Spectrometer, also called the MALDI-TOF or MALDI.

The MALDI identifies bacteria by measuring the charge-to-mass ratios of ionized proteins and comparing the patterns to those in a validated database. While initial culture to obtain isolated bacterial colonies is still required, the MALDI can then identify bacteria in less than an hour.

According to Amy Swinford, MS, DVM, microbiology branch chief, four bacteriologists have been trained on the MALDI technology, including herself. The technology is being used alongside traditional identification methods to compare results.

“We are currently in the verification stage, ensuring the results we get with the MALDI are equal or superior to those obtained with phenotypic or molecular identifications said Dr. Swinford. “Once fully incorporated, we also anticipate faster turnaround time. This instrument is revolutionary in that it can identify bacteria from a single colony and doesn’t depend on additional incubation steps.
The equipment requires intensive training and will take several months to fully implement into daily laboratory testing. Though the MALDI will soon become the primary means of bacterial identification, Dr. Swinford said that the bacteriology section will maintain the full complement of identification methods required by a state-of-the-art diagnostic bacteriology laboratory.

With the newest in analytical equipment backing highly skilled diagnosticians, TVMDL can continue to bring timely, accurate results to clients. For more information on TVMDL diagnostic testing services, visit tvmdl.tamu.edu.