



Veterinary Medical Diagnostic Lab

UNIVERSITY of MISSOURI

Under the 'Scope

January 2015

Meet the New VMDL Quality Assurance Coordinator

Susan Martin, Quality Assurance Coordinator of the VMDL, didn't waste any time getting started after joining the MU CVM. Before the completion of her first month on the job she had already attended the Quality Symposium held at the AAVLD meeting in Kanas City.

Martin's previous seven years of experience as the Assistant Manager of Pathology at the MU Women's and Children's Hospital prepared her in the areas of quality improvement and quality assurance, customer service and leadership. During her first six years in that role she was the operational manager in charge of the Clinical Pathology, Microbiology, Anatomic Pathology laboratories; as well as, the Blood Bank. During Martin's last year, her role was expanded to include administrative oversight for the University's Clinic laboratories; Cytology, Anatomic Pathology and IR Chemistry at the University Hospital; as well as the Toxicology, Special Chemistry and Molecular sections at the MU Ellis Fischel Cancer Center. Martin stated that the cross-over transition has been easy because the quality principles that govern laboratory medicine also apply to veterinary diagnostic

laboratory work. "In healthcare, the patient's needs, safety, and outcomes are always first. That mantra drives quality work as well since we must always ask ourselves, "How can we maximize the benefits for our clients and their patients," Martin said.

Martin and her husband are lifelong residents of Missouri and are both MU graduates. Their son Neal is currently a fourth year CVM student and their son Brian is engaged to 2014 CVM graduate Lynn Brockway. The Martin family has deep roots in agriculture. They have a livestock and row-crop farm near Centralia, Missouri where they run an Angus cross cow-calf operation and also produce corn, soybeans, wheat, hay and silage. Their three grown children all have careers within the agricultural industry.

Looking forward to the VMDL's future Martin states, "The quality system that is in place at the VMDL is an exemplary, multi-faceted program which assures the accuracy and quality of results in every step. Quality is the foundation of everything we do."

Quality Quarterly

For most people quality is associated with the idea of a product or service that is well done, looks good, and does its job well. In medicine, the concept of quality is based on an interaction among relevant actors who agree upon and establish standards (the norms and values) and the components (the possibilities) from which these standards are derived or arise. With respect to the University of Missouri Veterinary Medical Diagnostic Laboratory, quality comes down to this! "Is it correct, unambiguous, and timely?" Just as in your practice, a significant percentage of time of every VMDL workweek is devoted to ensuring that the results reported to every client are accurate, clinically relevant, and reported so as to avoid confusion. The VMDL quality system works every day to ensure that the thousands of individual steps which go into the generation of VMDL diagnostic reports are done correctly by qualified individuals working with the highest quality reagents, supplies, and equipment.

A critical component of VMDL quality is documentation, be it the standard operational procedure used to conduct a microbiological examination of a submitted sample, the daily monitoring of every piece of equipment in any VMDL section, or the log which explicitly states that all VMDL employees have read and understands every job-critical document in the laboratory. Control procedures are in place to ensure that the laboratory documents are readily available where related operations are performed, that these documents are regularly reviewed, that they are replaced by new or revised approved versions of the document when the need arises, and that the old versions are securely archived and/or discarded. Proper daily management of the documentation system allows VMDL to inform you on any given day of a variety of events. These

include when and how a sample was submitted, who handled it in receiving and within a testing section, who set up a test or tests, who interpreted the results of those tests, and who reported the results. The quality documentation system also ensures that these individuals have demonstrated initial and continuing competence in those activities, shows which instruments were used for processing, technical assessment of the sample, or for storage of the sample. In addition to all of that, the system can demonstrate the performance history of these instruments for the last several years. Very little is left to chance. In VMDL if you have not documented it, you have not done it! You don't have to take our word for it, we have the record!

The most important part of the VMDL Quality system is its people. Their education, professional competence, experience and dedication to our mission is integral to ensuring that the product you receive is the best it can be. To ensure that the high standards which we set for ourselves are met and maintained, all VMDL personnel, from the Director to the newest laboratory technician are required to engage in continued education programs as well as participate in internal and external checks on competency. Some laboratory sections are staffed by individuals who have completed nationally accredited certification programs. In order to maintain certification, these individuals participate in several hours of certification every year. In addition, every state licensed veterinarian on staff must participate in MVMA-approved continued education program to maintain their professional license. Non clinical faculty and technical staff are also required to engage in the numerous continued education opportunities provided by professional organizations within a given discipline. Activities such as these keep us apprised of the latest and greatest, reminds of us of the pitfalls of not doing it by the book, and allows us to meet for the first time or re-

acquaint ourselves with a colleague who just may know something we don't. Staying in the University setting was a choice, one made by those at VMDL who have dedicated their lives to learning, service, and teaching.

The system does not stop with continued education; to provide a high quality product, the system which provides it must be subjected to the reiterative process of assessing the standard, checking to see if the standard is met, and making a change where appropriate. We engage in this process through our internal and external competency programs. The former is VMDL-driven where faculty members and/or senior staff create an "unknown", follow it through the system, and ensure the correct answer is provided on time and in the right format. External proficiency testing is administered by outside agencies including the Federal government, professional organizations, or nationally accredited standards laboratories. Participation in these external proficiency exams is often voluntary and successful completion of proficiency test is documented and certifies VMDL to provide specific professional services such as testing for foreign animal diseases. In addition to these checks of technical activities, a number of individuals have undertaken the task of educating themselves about the quality process and attend USDA and professional organization sponsored seminars and courses on understanding and applying the tenets of a good quality system.

The VMDL Quality System was established by management, faculty, and staff and sets forth policies and procedures which provide guidance to the organization for a pathway to continuous improvement of its technical and professional performance, to meet and surpass regulatory or accreditation requirements, and to meet the ever increasing demand for compliance with international harmonization standards with respect to diagnostic testing of veterinary species or products. Such goals

are lofty, but VMDL personnel work every day to bring ourselves closer to achieving them and in doing so provide an ever increasing quality product for you, your clients, and most importantly those under your professional care.

- Mrs. Susan L. Martin,
VMDL Quality Assurance Manager

- Dr. Thomas J. Reilly,
VMDL Quality Assurance Officer

*From the Bacteriology/Mycology Section
of the VMDL and the Department of
Veterinary Pathobiology*

**Detection of a New
Bacterium from the Joint of a
Lame Holstein Calf**

Presented at the 57th National Annual Meeting of the American Association of Veterinary Laboratory Diagnosticians, October 2014, Kansas City, MO

A new bacterium was discovered in the joint of a Holstein calf that presented with lameness and respiratory distress. The lung culture revealed Corynebacterium, Staphylococcus spp and Streptococcus spp. Molecular diagnostics, using PCR, demonstrated the presence of Mycoplasma spp, in the lung, but not Mycoplasma bovis. The joint fluid was negative, by PCR, for all Mycoplasma. However, the joint fluid demonstrated a microorganism from the Eugon Chocolate agar cultured in 95% air-5% CO₂ (microaerophilic conditions) suggestive of Micrococcus when Histophilus somni was expected. Gene sequencing of the 16s Ribosomal RNA identified the isolate as Helcococcus ovis. To the investigators knowledge, this is the first report of this microorganism in a bovine calf joint.



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