Mastitis Microbiology School

Udder Health Systems is offering custom laboratory training for scientists looking to increase their understanding and skills in practical mastitis microbiology. This training is designed for individuals with basic biology training or experience ranging from the beginning laboratory analysts, to the experienced veterinarians, who wish to perform standard or advanced bovine mastitis microbiological test methods. The training will include methods to identify and differentiate up to 18 different mastitis causing organisms and other organisms commonly seen in cow milk samples.

Udder Health Systems is comprised of three, busy mastitis culture laboratories. Training will take place at our new facility near Boise, Idaho. This high volume facility provides an excellent opportunity for the trainee to receive one-on-one detailed training in laboratory techniques and procedures, gain a tremendous amount of wet lab experience with live fresh specimen, and be able to take this training home and immediately apply this knowledge at the bench. Training will be held in one week blocks and will be offered at 2 levels; Level 1 for the new analyst and Level 3 for the veterinarian or more experienced analyst. The following will be covered in these sessions:

Level 1: Introductory
- Characteristics and Morphology of Level 1 Organisms:
  - Staphylococcus aureus
  - Staphylococcus sp.
  - Streptococcus agalactia
  - Streptococcus sp.
  - Coliforms
  - Bacillus sp.
  - Mycoplasma
  - T. pyogenes
- Gram stain method and significance of Gram Reaction.
- Work with live control organisms on Washed Cow Blood agar
- Classification and interpretation of hemolytic reactions
- Coagulase, Catalase, CAMP, KOH, Esculin test methods and reactions.
- Introduction to Selective agars: MP2, McConkey, Mycoplasma, Edwards, Salt
- Introduction to Mycoplasma reading.

Level 3: Advanced
- Characteristics and Morphology of Level 3 Organisms:
  - Streptococcus uberis
  - Streptococcus dysgalactia
  - E. coli
  - Serratia
  - Pseudomonas sp.
  - Pseudomonas aeruginosa
  - Prototheca
  - Klebsiella sp.
  - Klebsiella pneumonia
  - Proteus
  - Pasteurella
  - Yeast
  - Prototheca
  - C. bovis
- In depth training on all secondary tests: CAMP, KOH, Coagulase, Catalase, Gram stain, wet mounts, Esculin reactions, hemolysin reactions
- Differentiation of Mastitis causing and Environmental Streptococci
- Differentiation of Mastitis causing and Environmental Coliforms
- Differentiation of Mastitis causing and Environmental Mycoplasmas and Acholeplasmas
- Advanced specialty agars: Inulin, Prototheca, KCT
- Introduction to Molecular methods PCR and MALDI-TOF mass spectrometry
- Finish with practical and written unknown proficiency tests.

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This is a unique opportunity to increase your understanding of mastitis pathogens, which cause the most significant economic losses due to disease in the dairy cow. The knowledge and skills you will obtain from this UHS training will increase your ability to make specific and appropriate disease control recommendations based on an accurate diagnosis. To be effective in mastitis control consulting, one must begin by knowing the name of the enemy. A larger body of valuable mastitis prevention and mastitis control management methods become available once an accurate diagnosis is made. Many microbiology laboratories that have not had this training on these specific organisms in cow milk are missing a major opportunity to solve a disease problem and help with the profitability of the dairy.

Please join us on our next School! All Training will be in a classroom setting or the laboratory. There will be one short field trip demonstrating sample collection issues. The course will go from Monday thru Thursday from 9 AM to 4 PM with an hour off for lunch. On Friday the Class will only be held in the morning. The School will end Friday at noon.

Hotel accommodations are available typically for less than $80 per night. The Boise laboratory is located just a few minutes from the Boise airport. We can assist in arranging transportation logistics to and from the airport and hotels.

**Tuition Fee is $1500 for the week. The course is RACE approved for 8 CE credits**

Please contact us and let us know if you would like to participate and we will help you with the arrangements.

Sincerely,

Allan M. Britten D.V.M., M.P.V.M.
Laboratory Director

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Customer Relations Manager