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CLSI Subcommittee on Veterinary Antimicrobial Susceptibility Testing (VAST) Meeting Summary Minutes (Draft)

Meeting Title:	Subcommittee (SC) on Veterinary Antimicrobial Susceptibility Testing (VAST)	**Contact:**	Lori Moon (lmoon@clsi.org)
Meeting Date:	24 – 25 January 2019		
Start Time:	24 January- 1:00 PM US Eastern Standard Time (EST) 25 January – 8:00 AM EST	**End Time:**	5:00 PM EST 2:00 PM EST
Meeting Purpose:	A meeting of the Clinical and Laboratory Standards Institute (CLSI) Subcommittee on Veterinary Antimicrobial Susceptibility Testing (VAST) was held on 24- 25 January 2019 at the Renaissance World Golf Village Hotel in St. Augustine, Florida.		
Requested Attendee(s):	Subcommittee Chairholder, Vice-chairholder, Members, Advisors, and Reviewers (see subcommittee roster); CLSI staff; meeting guests		
Actual Attendee(s):	See sign-in Sheets (Attachment 1)		

Brian V. Lubbers, DVM, PhD, DACVCP **Chairholder**	**Kansas State Veterinary Diagnostic Laboratory**
Mark G. Papich, DVM, MS **Vice-Chairholder**	**College of Veterinary Medicine, North Carolina State University**
Lacie Johansen, BS **Secretary/Advisor**	**Zoetis**

Members Present

Dubraska V. Diaz-Campos, DVM, PhD	The Ohio State University
Cory Langston, DVM, PhD	Mississippi State University
Xian-Zhi Li, PhD	Health Canada Veterinary Drugs Directorate
Sakurako Marchand, MT	bioMerieux, Inc.
Ian Morrissey, PhD	IHMA Europe Sarl
Thomas R. Shryock, PhD	Antimicrobial Consultant, LLC
Virginia Sinnott-Stutzman, DVM, DACVECC	Angell Animal Medical Center (MSPCA)
Michael T. Sweeney, MS	Zoetis

Members Absent

Mark D. Fielder, MD	Kingston University London
Marilyn N. Martinez, PhD	FDA Center for Veterinary Medicine
Shabbir Simjee, BMs	Elanco Animal Health
Darren Trott, DVM, PhD	University of Adelaide School of Animal and Veterinary Science

Advisors Present

Donald J. Bade, BS	Microbial Research, Inc.
Claire R. Burbick, DVM, PhD, DACVM	Washington State University
Virginia R. Fajt, DVM, PhD, DACVCP	Texas A&M University
Thomas R. Fritsche, MD, PhD, FCAP, FIDSA	Marshfield Clinic
Nicole M. Holliday, BA	Thermo Fisher Scientific
Sara Lawhon, DVM, DACVM	Texas A&M University
Dee Shortridge, PhD	JMI Laboratories
Maria M. Traczewski, BS, MT(ASCP)	The Clinical Microbiology Institute
John D. Turnidge, MD, BS, FRACP	University of Adelaide

Reviewers Present

Casey L. Cazer, DVM	Cornell University, College of Veterinary Medicine
Keith DeDonder, DVM, PhD, DACVCP	Veterinary and Biomedical Research Center, Inc.
Robert P. Hunter, MS, PhD	One Medicine Consulting
Scott B. Killian, BS	Thermo Fisher Scientific
Cynthia C. Knapp, BS, MS, MT(ASCP)	Thermo Fisher Scientific
David Paisey, BSc	Thermo Fisher Scientific
Susan Thomson	MAST Group
Jeffrey L. Watts, PhD	Zoetis

Guests Present

Heike Kaspar	Federal Office of Consumer Protection and Food Science
Cecile Kerdraon	bioMerieux, Inc.
Megin Nichols	Centers for Disease Control and Prevention
Nilia M. Robles-Hernandez	bioMerieux, Inc.
Cindy Somogye	bioMerieux, Inc.
Jurgen Wallmann	Federal Office of Consumer Protection and Food Science

Staff

Lori T. Moon, MS, MT (ASCP)	CLSI

Opening PLENARY AGENDA
Thursday, 24 January 2019
Registration at Convention Desk (Legends foyer)
1:00 – 5:00 pm in Legends 1

Item #	Item Title	Start	End	Length (min)	Category	Presenter(s)	Folder
	Luncheon – Ballroom E	12:00p	01:00p	60			
1)	Opening Remarks	01:00p	01:05p	5	Opening Remarks	Dr. Brian Lubbers	N/A
2)	Updates to Disclosure of Interest (DOI) Summary	01:05p	01:10p	5	DOI Updates	Dr. Lubbers	2
3)	Approval of Agenda	01:10p	01:15p	5	Approval	Dr. Lubbers	3
4)	Approval of January 2018 Meeting Summary Minutes and Review of Action Items	01:15p	01:20p	5	Approval/Review	Dr. Lubbers	4
5)	Working Group on Topicals	01:20p	01:25p	5	Inquiry	Dr. Lubbers	N/A
6)	CLSI Updates	01:25p	01:30p	5	CLSI Updates	CLSI Staff	5
7)	**Liaison Reports:** **EUCAST, VetCAST Update** **VAST-AST Liaison Update**	 01:30p 01: 35p	 01:35p 01:45p	 5 5	 EUCAST, VetCAST Liaison(s) VAST-AST Liaison	 Dr. John Turnidge Dr. Thomas Fritsche	 6
8)	**AAVLD Communications**	01:45p	02:15p	30	AAVLD Liaisons	Dr. Dubraska Diaz-Campos Dr. Claire Burbick	6
9)	**Generic Drug Working Group** Breakpoint Presentation: Ceftazidime for Dogs	02:15p	03:00p	45	Presentation/Discussion/Vote	Dr. Mark Papich	7
10)	**Generic Drug Working Group**	03:00p	03:15p	15	WG Report/Discussion	Dr. Papich	7
	Break	03:15p	03:30p	15			
11)	**Document Development Committee (DDC) on Understanding AST Data in Veterinary Settings (VET09)** Committee Draft/Subcommittee Draft comment resolutions	03:30p	05:00p	90	Presentation/Discussion/ Vote	Dr. Virginia Fajt	8
12)	**Adjourn**	05:00p				Dr. Lubbers	N/A

Closing PLENARY AGENDA
Friday, 25 January 2019
8:00 AM – 2:00 PM in Legends 1
Breakfast Available 7:00 – 8:00 am (Legends 2)
Luncheon:11:45 am – 12:45 pm (Legends 2)

Item #	Item Title	Start	End	Length (min)	Category	Presenter	Folder
13.	**CLSI Update**	08:00a	08:15a	15	CLSI updates	Mr. Glen Fine	**N/A**
14.	**WG on Editorial/VAST Breakpoint Tables (VET08)** Consensus comment discussions, decisions, and planning for next revision	08:15a	09:45a	90	Presentation/Discussion/Vote	Mr. Michael Sweeney	**9**
15.	**Chloramphenicol in Dogs** GWG Report Information	09:45a	10:15a	30	Presentation/Discussion	Dr. Cory Langston	**N/A**
	Break	10:15a	10:30a	15			
16.	**WG on BMIC** Summary/Abbreviated WG Report Presentation	10:30a	10:45a	15	WG Report/Discussion	Dr. Watts	**N/A**
17.	**VFM WG** Summary/Abbreviated WG Report Presentation	10:45a	11:30a	45	WG Report/Discussion	Mr. Don Bade	**13**
18.	**WG on Aquaculture AST Methods (VET03)** Overview of VET03 revision and consolidation; discussion of any issues and approval to submit to be prepared for Proposed Draft vote	11:30a	11:45a	15	Presentation/Discussion/Vote	Dr. Claire Burbick	**12**
	Luncheon – Legends 2	11:45a	12:45p	60			
19.	**Education WG** Summary/Abbreviated WG Report Presentation	12:45p	1:15p	30	WG Report/Discussion	Dr. Diaz-Campos	**14**
20.	**Gene Nomenclature** Presentation of gene nomenclature that should be used in VET08 and other documents	01:15p	01:30p	15	Presentation/Discussion	Dr. Lubbers	**10**
21.	**Other Business**	01:30p	02:00p	15	Discussion	Dr. Lubbers	**N/A**
22.	**Adjourn**	02:00p					

Summary Minutes	
Day 1: 24 January 2019	
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Item	**Description**
1.	**Opening Remarks and Introductions:** Dr. Brian Lubbers opened the plenary session of the Subcommittee on Veterinary Antimicrobial Susceptibility Testing (VAST) at 1:00 PM US Eastern Standard Time (EST) by welcoming the attendees and thanking them for their participation and hard work, and thanked volunteers for serving on the various Working Groups, most of which met earlier today. Dr. Lubbers then invited everyone to introduce themselves. Dr. Lubbers stated that the purpose of the meeting is for sponsors to present data and the working groups to address their agenda item topics and obtain input from the subcommittee. There are no sponsor scheduled to present data during this meeting. However, there is a full agenda with presentations from the working groups, including one breakpoint presentation from the Generic Drugs Working Group (GWG) and GWG report information on chloramphenicol in dogs. During this time, the subcommittee will make motions and vote on the agenda topics. Dr. Lubbers mentioned the importance of the discussions on comments received on the VET09 Proposed Draft (PD) Report so comments can be resolved and the report can stay on time for June 2019 publication. Revision will begin on the VET08S, 4th edition with resolution of issues that were held as Consensus Comments during the VET08 WG presentation. The VET08 (5th edition) revision is tentatively projected to publish in June 2020. The 2019 Subcommittee on VAST has 12 voting members. There are 8 members present at this meeting and Dr. Lubbers reviewed the applicable rules on voting in the January 2019 VAST Meeting Materials folder 02_Meeting_Info_Letter_Roster_DOI (2019_Jan_VAST_2-5_SC_Approach_to_Disclosures_and_Voting and 2019_Jan_VAST_2-6_Voting_Rules): **2019 Roster – 12 voting members (excludes Chairholder and Vice-chairholder)** **Committee Status** — **"Pass" Vote** All members present and voting — 12-0, 11-1, 10-2, 9-3, 8-4, 7-5 One member not present or abstaining — 11-0, 10-1, 9-2, 8-3 Two members not present or abstaining — 10-0, 9-1, 8-2, 7-3 Three members not present or abstaining — 9-0, 8-1, 7-2 If more than three members not present: — Chairholder's discretion to conduct vote or table until sufficient members are present or mail vote taken. Dr. Lubbers noted that 8 voting members are present, so a vote will only pass if the members present are unanimous in accepting a motion. If not, a summary of the discussions on the material presented for vote will be sent to the voting members who were unable to attend the meeting. Per the CLSI Standards Development Policies and Processes (SDPPs), votes taken following a face-to-face meeting need to be completed in 5 days from the last day of the meeting.

Summary Minutes	
Item	**Description**
1. (cont'd)	**Changes to the Subcommittee in 2019 include:** **New Voting Member (total = 12):** – Sakurako Marchand, MT (I) – from bioMerieux, Inc. who has served as an advisor on the subcommittee from 2017 - 2018 **New Committee Secretary:** – Lacie Johansen, BS (I) – who has served as a reviewer on the subcommittee from 2017 – 2018 will serve as VAST SC secretary for 2019 **New Advisors (new total = 15):** – Claire R. Burbick, DVM, PhD, DACVM (P) – who has served as a reviewer on the subcommittee from 2016 - 2018 – Nicole M. Holliday, BA (I) – who has served as a member on the subcommittee from 2014 – 2018 – Lacie Johansen, BS (I) – who has served as a reviewer on the subcommittee from 2017 – 2018 – Sara Lawhon, DVM, DACVM (P) – who has served as a reviewer on the subcommittee from 2015 - 2018 **Other appointments in 2019:** – Robert Bowden, BS – will continue serving as a reviewer on the subcommittee but he has stepped down from his role as VAST-AST Subcommittee Liaison – Thomas R. Fritsche, PhD, FACP, FIDSA (P) – will continue serving as an advisor on the subcommittee and he will also serve as the VAST-AST Subcommittee Liaison for 2019
2.	**Disclosure of Interests (DOI) Summary Update:** Dr. Lubbers asked the members and advisors to check the DOI Summary provided in the meeting materials for any updates to the current disclosure summary and send any updates to Ms. Moon at lmoon@clsi.org.
3.	**Approval of Agenda** Dr. Lubbers noted that there were several changes in the January 2019 VAST Subcommittee meeting agenda due to the US government shutdown, which has prevented volunteers who were on the agenda from attending and making their presentations. Dr. Lubbers asked for approval of the revised subcommittee meeting agenda displayed (see meeting minutesd pages 4-5).
	A motion was made by Dr. Cory Langston and seconded by Dr. Dubraska Diaz-Campos to accept the revised agenda, and hearing no comments or objections, the motion was passed.

Summary Minutes	
Item	**Description**
4.	**Approval of the January 2018 Summary Minutes and Action Items** The summary minutes of the 25-26 January 2018 subcommittee meeting were circulated with the meeting agenda and background materials for this meeting. Dr. Lubbers asked for any discussion, corrections, or approval of the January 2018 subcommittee meeting minutes. A motion was made by Dr. Langston and seconded by Dr. Virginia Sinnott-Stutzman to accept the January 2018 subcommittee meeting minutes, and hearing no comments or objections, the motion was passed. The meeting minutes will be posted on the CLSI website (at https://clsi.org/meetings/subcommittee-on-vast/vast-meeting-files-resources/).
5.	**Working Group on Topicals** The Working Group (WG) on Topicals needs a new chairholder because former WG chairholder, Dr. Amy Trettien, is no longer available. Dr. Diaz-Campos, who serves as the WG on Topicals secretary, discussed questions and comments about what the WG was working on and would like to see work continued. Ms. Sakurako Marchand asked if the forthcoming VET09 report indicates that topical agents should not be tested, then why would we want a WG to set breakpoints, which would lead people to think topicals should be tested and CLSI would have conflicting documents. Dr. Mark Papich provided background information, that WG on Topicals was formed and Dr. Trettien was working with looking at existing topical breakpoints, ie, for mupirocin. Dr. Lubbers commented that the VAST Subcommittee has been approached by sponsors about breakpoint proposal presentations, leading to the need to know how to handle those requests, and the process for topical breakpoints being set. Dr. Jeffrey Watts mentioned that the International Society for Companion Animal Infectious Diseases (ISCAID) documents mention using topicals more often and/or as a first choice, which could lead to resistance. Dr. Watts mentioned that the WG on Topicals had discussed testing mupirocin at a high resistance level, as is done with gentamicin for high-level aminoglycoside testing, and testing and/or setting breakpoints for products that are only antimicrobial, not antimicrobial/antifungal/steroid combinations. With those issues, Dr. Watts would be concerned about disbanding the Topicals WG. The subcommittee agreed with continuing the WG on Topicals at this time. However, there were no volunteers to serve as chairholder, so the topic was tabled. Dr. Watts, Dr. Papich, and Dr. Robert Hunter volunteered to help continue progress on the issue of topicals (**Action Item**).
6.	**CLSI Updates** The current status of documents in the CLSI Subcommittee on VAST library (all VET documents) and the Subcommittee on Antimicrobial Susceptibility Testing (AST) library (CLSI documents M02, M07, M11, M23, M39, M45, and M100) are included in the meeting agenda and background materials (folder 05), including the document type (ie, standard, guideline, supplement, or report), the current published edition and publication date, the due date for the next 5-year review, and comments and/or information on future document content. Also included are the CLSI microbiology publications in 2018, free resources available on the CLSI website, and an example of the new breakpoint rationale documents being published by the AST Subcommittee.
7.	**Liaison Reports:** • **VAST-AST Liaison Update**– Dr. Thomas Fritsche, who will be serving as the VAST Subcommittee liaison to the AST Subcommittee for 2019, went over meeting minutes from the January 2018 AST Subcommittee meeting that he did not attend. Dr. Fritsche suggested the group should review the AST meeting minutes, which have lots of great things including information about a few new drugs, breakpoint rationale documents, and a direct AST method for disk diffusion testing from blood cultures. (**Note:** the AST Subcommittee meeting minutes and presentation files are available on the CLSI website at https://clsi.org/meetings/ast-file-resources/). • **EUCAST/VetCAST** – Dr. John Turnidge, who serves as liaison to the European Committee on Antimicrobial Susceptibility Testing (EUCAST) and the EUCAST Veterinary Subcommittee on Antimicrobial Susceptibility Testing (VetCAST), reported that EUCAST is working hard, with lots of activities going on. EUCAST already has a published direct test from blood culture AST method by disk diffusion. EUCAST has also eradicated the "Intermediate" interpretive category and changed it to "Susceptible, increased exposure." EUCAST can do that because they work with wild-type vs. non-wild-type and all breakpoints are dose-dependent. They are waiting for feedback from EUCAST users on being able to sell the concept of increased exposure. Some laboratories may choose to report as Susceptible with a comment about dosing regimen. • **USCAST** – The United States Committee on Antimicrobial Susceptibility Testing (USCAST) is not interested in veterinary antimicrobial susceptibility testing, as reported at previous VAST Subcommittee meetings, and it is assumed to be the same.

Item | **Description**

8. **American Association of Veterinary Laboratory Diagnosticians (AAVLD) Communications**

Dr. Diaz-Campos presented the background slides in the Meeting Materials (folder 06). AST results have been discussed within AAVLD, and one issue mentioned is that most AST manufacturers instrument software didn't have updates from the most current CLSI document VET08, 4th edition. Dr. Claire Burbick presented the cases and results in the slides, and discussed the need by clinical microbiology laboratories for more resources and education on AST breakpoints. Dr. Ian Morrissey discussed the issue of well-behaved isolates in minimal inhibitory concentration (MIC) testing and that laboratories should ensure isolates selected for testing are reproducible several times before being selected for use in the Interlaboratory Bacteriology Quality Assurance Survey (IBQAS) testing. There should also be additional questions for the laboratories about testing methodology and AST result interpretations to be specific about what they are using. Mr. Don Bade and Ms. Maria Traczewski asked if the laboratories participating in the IBQAS are submitting quality control (QC) data. If not, it should be requested that IBQAS isolates AST is performed when the QC for the particular media and/or panel is tested.

9. **GWG Breakpoint – Breakpoint Presentation: Ceftazidime for Dogs**

Dr. Papich presented slides of the document in the meeting materials (folder 07), which will be posted with the VAST Meeting Files (**Action Item**). The first proposal was for the following clinical breakpoints to be added in Table 2A for *E. coli* from dogs (skin and soft tissue): S (≤4 µg/mL), I (8 µg/mL), and R (≥16 µg/mL), as shown below:

Test/ Report Group	Body Site	Antimicrobial Agent	Organism	MIC BPs and Interpretive Categories (µg/mL)			Comments
				S	I	R	
Cephalosporins							
Dogs							
A	Skin, soft tissue	Ceftazidime	*E. coli*	≤ 4	8	≥ 16	(X). Ceftazidime breakpoints were determined from an examination of MIC distribution data and PK-PD analysis of ceftazidime. The dosage regimen used for PK-PD analysis of ceftazidime 25 mg/kg administered every 8 hours in dogs.

A second proposal was made for the following clinical breakpoints to be added in Table 2B for *Pseudomonas aeruginosa* from dogs (skin and soft tissue): S (≤8 µg/mL), I (16 µg/mL), and R (≥32 µg/mL) as shown below:

Test/ Report Group	Body Site	Antimicrobial Agent	Organism	Disk Content	Zone Diameter BPs and Interpretive Categories (nearest whole mm)			MIC BPs and Interpretive Categories (µg/mL)			Comments
					S	I	R	S	I	R	
Cephalosporins											
Dogs											
A	Skin, soft tissue	Ceftazidime	*P. aeruginosa*	–	–	–	–	≤ 8	16	≥ 32	(X). Ceftazidime breakpoints were determined from an examination of MIC distribution data and PK-PD analysis of ceftazidime. The dosage regimen used for PK-PD analysis of ceftazidime 25 mg/kg administered every 6 hours in dogs.
Humans											
		Ceftazidime	*Enterobacteriaceae*	30 µg	≥ 18	15-17	≤ 14	≤ 4	8	≥ 16	(X) Based on a dose of 1 gram every 6 hours, or 2 grams every 8 hours.

Item	Description
9. (cont'd)	**GWG Breakpoint – Breakpoint Presentation: Ceftazidime for Dogs (continued)**

In addition to slides presented, Dr. Papich proposed to extrapolate the human AST disk diffusion breakpoints to also be included for dogs, because the proposed MIC values for canine breakpoints are identical to the human breakpoints (which were recently revised). Dr. Virginia Fajt questioned whether it is also proposed to include the human breakpoints from M100, Table 2A (*Enterobacteriaceae*) and M100, Table 2B-1 (*Pseudomonas aeruginosa*) in VET08 Table 2A and 2B, respectively. Dr. Morrissey suggested that the human breakpoints should be included for non-dog pathogens. Dr. Thomas Shryock mentioned the need for dosing in the VET08 tables, discussed the option to remove skin and soft tissue for dogs and the updating of other related tables including QC tables with data from M100, diluents, the glossaries and abbreviations, and Appendix A (unusual resistance) (**Action Item**).

Mr. Michael Sweeney asked about dosing in veterinary hospitals and what is commonly used. Dr. Sinnott-Stutzman provided common doses (2 options). Dr. Morrissey looked up the EUCAST dosages, and there is no dosing for other *Enterobacteriaceae* above 1 µg/mL and therefore he suggested replacing *E. coli* with *Enterobacteriaceae*. Dr. Shryock suggested looking at other veterinary-specific breakpoints set by the GWG to determine if the Subcommittee needs to address whether other GWG breakpoints for *E. coli* should be changed to *Enterobacteriaceae* or left as *E. coli* (**Action Item**).

There was discussion about listing it in Table 1, Group A – Veterinary-Specific Breakpoints Primary Test and Report - because it appears to suggest that laboratories should routinely test and report but ceftazidime is a 'drug of last resort.' It was further discussed whether or not Table 1, Group A may need an additional category for better guidance to help laboratories. Dr. Shryock talked about the new CLSI document VET09 addressing the VET08, Table 1, Group A. Ceftazidime is already included on the test panels that most laboratories are using. Table 1, Group D was suggested as a possible location for including ceftazidime, because it does not specify human or veterinary breakpoints, just to selectively test and selectively report. The Subcommittee agreed on the need to redo the Table 1 groupings.

Ms. Lori Moon revised the presentation slides for the canine ceftazidime breakpoints that were voted on, with the comment modified to include routes for administration of intramuscularly (IM), intravenously (IV), or subcutaneously (SC). As a result of discussion, the proposed Table 2A entry was amended to the following:

Proposal (1) to add clinical breakpoints for *Enterobacteriaceae* from dogs (skin and soft tissue) to VET08, Table 2A:

Test/ Report Group	Body Site	Antimicrobial Agent	Organism	Disk Content	Zone Diameter BPs and Interpretive Categories (nearest whole mm)			MIC BPs and Interpretive Categories (µg/mL)			Comments
					S	I	R	S	I	R	
Cephalosporins											
Dogs											
A	**Skin, soft tissue**	**Ceftazidime**	***Enterobacteriaceae***	**30 µg**	**≥ 21**	**18-20**	**≤ 17**	**≤ 4**	**8**	**≥ 16**	**(X). Ceftazidime breakpoints were determined from an examination of MIC distribution data and PK-PD analysis of ceftazidime. The dosage regimen used for PK-PD analysis of ceftazidime 25 mg/kg administered every 8 hours IM, IV, or SC in dogs.**
Humans											
		Ceftazidime	*Enterobacteriaceae*	30 µg	≥ 21	18-20	≤ 17	≤ 4	8	≥ 16	(X) Based on a dose of 1 gram every 8 hours.

Item | **Description**

9. (cont'd)

GWG Breakpoint – Breakpoint Presentation: Ceftazidime for Dogs (continued)

Proposal (2) to add clinical breakpoints for *P. aeruginosa* from dogs (skin and soft tissue) to VET08, Table 2B:

Test/ Report Group	Body Site	Antimicrobial Agent	Organism	Disk Content	Zone Diameter BPs and Interpretive Categories (nearest whole mm)			MIC BPs and Interpretive Categories (µg/mL)			Comments
					S	I	R	S	I	R	
Cephalosporins											
Dogs											
A	**Skin, soft tissue**	**Ceftazidime**	***P. aeruginosa***	**30 µg**	**≥ 18**	**15-17**	**≤ 14**	**≤ 8**	**16**	**≥ 32**	**(X). Ceftazidime breakpoints were determined from an examination of MIC distribution data and PK-PD analysis of ceftazidime. The dosage regimen used for PK-PD analysis of ceftazidime 25 mg/kg administered every 6 hours IM, IV, or SC in dogs.**
Humans											
		Ceftazidime	*Enterobacteriaceae*	30 µg	≥ 18	15-17	≤ 14	≤ 4	8	≥ 16	(X) Based on a dose of 1 gram every 6 hours, or 2 grams every 8 hours.

A motion was made by Dr. Shryock and seconded by Dr. Langston to accept the **Proposals 1 and 2** (above) for breakpoints and comments for ceftazidme applicable to canine *Enterobacteriaceae* pathogens to be added in VET08, Table 2A, and for *P. aeruginosa* be added in VET08, Table 2B.
Vote on the Motion: Passed (8-accept, 0-reject, 0-abstained, 4-absent)
This vote will also be sent out following the full reopening of the US federal government, for a 5-day electronic vote by the 4 members who are not in attendance at this meeting (**Action Item**).

A third proposal with additional recommendations (below) was also made, to:

- Include ceftazidime (dogs only) in VET08, Table 1 for testing for ceftazidime for *Enterobacteriaceae* and *Pseudomonas aeruginosa* in Dogs (with location in Table 1 to be determined by the VET08 WG for future proposal to the VAST Subcommittee)
- In addition to the breakpoint, include the dose and dosing route used for PK-PD analysis in the Comment sections of Table 2A and 2B (*shown in amended proposals (1) and (2) above)
- Update other related tables including QC tables with data from M100, diluents, the glossaries and abbreviations, and Appendix A (unusual resistance
- Include canine-ceftazidime breakpoints in the VET08 new 'front matter' table (listing newly-approved breakpoints) and in the cumulative list of veterinary-specific breakpoints in Appendix E

A motion to accept **Proposal 3** (above) was made by Dr. Sinnott-Stutzman and seconded by Mr. Sweeney.
Vote on the Motion: Passed (8-accept, 0-reject, 0-abstained, 4-absent)
This vote will also be sent out following the full reopening of the US federal government, for a 5-day electronic vote by the 4 members who are not in attendance at this meeting (**Action Item**).

10. **GWG Update**

Dr. Papich presented slides on the GWG progress and shared some recent publications that had findings that matched some breakpoints previously set by the GWG. He also displayed a potential list of future breakpoints needed, including:

- Chloramphenicol (dogs, horses) – Dr. Langston is currently compiling data
- Trimethoprim-sulfamethoxazole (dogs, cats, horses)

Summary Minutes	
Item	**Description**
10. (cont'd)	**GWG Update (continued)** • Rifampin (dogs, horses) • Other 3rd-generation cephalosporins (cefotaxime)? (dogs, cats, horses) • Imipenem (dogs, cats), as a drug of last resort – the subcommittee has always vote "no" in the past and a straw poll was taken with 4-yes, 4-no • Tylosin (cattle, pigs) • Amoxillin, amoxicillin-clavulanate (cat-urine) Additional suggestions were made to include tylosin for dogs (orally), azithromycin for *Rhodococcus equi* in horses. Because there is no CLSI VAST-approved AST method for *Rhodococcus spp.*, this might be considered for inclusion in CLSI supplement VET06 (not a standard) (**Action Item**).
11.	**Document Development Committee (DDC) on Understand AST Data in Veterinary Settings (VET09)** Dr. Fajt introduced the VET09 report and provided the history of the document. The Document Development Committee (DDC) on Understanding AST Data in Veterinary Settings (VET09) began work on the document last January and many issues have been addressed since then. Dr. Papich asked Dr. Fajt to explain the goals of the VET09 report and the ultimate end user of the document. Dr. Fajt stated that much of the work that the VAST Subcommittee does is directed at the laboratory while the end user of the data is the veterinarian or client. The primary guidance of the VET09 document is for the end user (veterinarian or client) but there is also some guidance for the laboratory. The VET09 DDC continued developing the document throughout 2018 and completed the VET09 DDC-Committee Draft review, 'approval,' and comment period from 5-21 Nov 2018 (Note: Reports are derivative products, which do not go through the full consensus process and do not have an *official* ballot [vote] by either DDC or Subcommittee). The VET09 was well-reviewed and received 474 comments received during the VET09 DDC-Committee Draft period. Chairholder-proposed resolutions and common issues were discussed during the VET09 DDC Web conference held on 6 Dec 2018, with feedback provided through 18 Dec 2019, when the VET09-Subcommittee Draft was circulated on 18 Dec 2018 to the VAST Subcommittee members and advisors, as well as included in the meeting materials (folder 08). There were 197 comments received from the VAST Subcommittee on the VET09-Subcommittee Draft document, with many of the comments being editorial in nature. Chairholder-proposed resolutions and common issues were discussed during the VET09 DDC Web conference held on 16 Jan 2019, and most issues were resolved but the outstanding issues presented today are the substantive issues that go beyond editorial management: • Issue 1: The first issue was presented regarding the front matter, tagline, and the abstract, which had been missing from the VET09 Subcommittee (SC)-Draft. The abstract is a short version of what is in the document. • Issue 2: There was a comment regarding the scope. There was a request to include poultry. Dr. Fajt recommended at the last VET09 DDC meeting that we add the response in the table which essentially says that the document does not address interpretation of antimicrobial drugs on poultry. There is only one poultry breakpoint. Dr. Papich indicated that early on there was a request for guidance for exotic animals but the committee agreed that we should start slow. • Issue 3 requested to remove non-mammalian species to aquatic animal species to be consistent with VET03 and VET04. • Issue 4: There was a comment about the term "extra-label" (vs. "extralabel"). In the regulations it is not hyphenated and the Subcommittee agreed to be consistent with the federal law. CLSI use is only in the VET documents, so the decision of the VAST Sub-committee will be used in the CLSI Harmonized Terminology Database (HTD) (at https://clsi.org/standards-development/harmonized-terminology-database/). • Issue 5: The comment was requesting clarification on what could be altered in a dosing regimen and the impact on AST interpretation. The VET09 DDC provided a comment to address this issue that will be used in each species-specific chapter. Dr. Burbick suggested that the added comment should be "changing the dose" (rather than "increasing the dose"). Dr. Lubbers indicated that "changing the dosing regimen" (whether dose, route, duration, and/or frequency) should be stated and this change was agreed on. • Issue 6: No changes were made. • Issue 7: No comments were made.

Summary Minutes	
Item	**Description**
11. (cont'd)	**<u>DDC on Understanding AST Data in Veterinary Settings (VET09)</u> (continued)** • Issue 8: There was some discussion on the *Bordetella bronchiseptica* breakpoint. The table (Table 15) was confusing so the canine and swine breakpoints were footnoted and the header was changed to "Human and Other Breakpoints." • Issue 9a: Originally the human breakpoints were referenced in a general way. This was modified to reference other CLSI documents and a table was added to provide a location for where a user would find information within other CLSI documents and recommends consultation with a clinical pharmacologist or clinical microbiologist. There was discussion about the language used regarding infrequently isolated. There was a comment to reference M45 for infrequently isolated organisms. Mr. Sweeney asked about *Bibersteinia trehalosi*. Dr. Burdick indicated that we do not have any information on *Bibersteinia trehalosi* so it should not be included. Dr. Burdick had additions, anaerobes and *Campylobacter* for the swine document. Ms. Moon asked Dr. Fajt if we should discuss Dr. Govendir's comment about discussion about organisms for which there are no breakpoints. Dr. Fajt indicated that a paragraph in Subchapter **2.1.3 How are Breakpoints Set?** has been added to describe circumstances that result in there being no breakpoints and some organism examples. There was discussion about the bacterial examples and the group made modifications captured by Ms. Moon, with the following text was added as paragraph 2 (subject to further editing): "Breakpoints have not been set for certain veterinary pathogens for several reasons. Bacteria may be difficult to grow in standard media or under standard testing conditions, eg, intracellular bacteria, *Borrelia,* and *Mycoplasma* spp. Some veterinary pathogens need higher biosafety levels than may be available in veterinary diagnostic laboratories, eg, *Brucella* and *Leptospira* spp." • Issue 10: There was a question about tissue specific concentrations. Dr. Papich will address the comment. • Issue 11: The DDG discussed that they were confident in the veterinary specific breakpoints. There was discussion within the DDG regarding the levels of evidence. Dr. Morrissey asked about VET06 and the relationship between VET06 and VE 09. • Issue 12: There was a question about sepsis which was originally included as a site but since it is not a site, the group decided to remove sepsis. Dr. Turnidge commented that the issue is difficult because there is not much data on sepsis because of the challenges with sepsis and that if you can get a 1 to 2 log decrease in bacteria that you are working in the best interest of the patient. • Issue 13: The tables on horses and drugs that were extrapolated. The table was modified and revised to be more equine centric. Ms. Moon also took notes and documented final decisions in the VET09-VAST Subcommittee Draft comment table (see Attachment 2), with corresponding edits made (or to be made) in the VET09 draft document, and the VET09 Outstanding Issues table (see Attachment 3). Additional follow-up on Outstanding Issues 9a-9b was sent to the VET09 DDC after the 16 Jan 2019 for additional input (see Attachment 4). Based on input from the VAST Subcommittee, the VET09 draft document will be updated (**Action Item**) and sent to the VET09 DDC and will be finalized 5 days after the US federal government shutdown ends (**Action Item**). The VET09-Subcommittee Draft Comment Table with proposed comment resolutions will be sent for final 1-2 week review by VAST SC commenters in early- to mid-February 2019 (**Action Item**) to be submitted to go through the full CLSI editorial process by March 2019 (**Action Item**).
	A straw poll was taken to accept the proposed final resolutions to the VET09 Outstanding Issues (comments from the VAST Subcommittee review 18 December 2018 – 8 January 2019) as discussed and recorded in the VET09-VAST Subcommittee Draft Comment Table (Attachment 2) and the VET09 Outstanding Issues table (Attachment 3). **Straw vote results: 8-accept, 0-reject, 0-abstained, 4-absent**
	The subcommittee also had suggestions VET09 report marketing and outreach efforts, including webinars with continuing education (CE) credits, a social media campaign, and promotion to include in veterinary medical school libraries, which will be forwarded to CLSI Marketing (**Action Item**).
12.	The meeting was adjourned at 5:00 PM EST until the following day.

Summary Minutes

Day 2: 25 January 2019

Meeting opened at 8:02 AM EST

Opening remarks: Dr. Lubbers welcomed everyone and reviewed the updated agenda with the plan to start with a brief, additional CLSI update presentation from Mr. Glen Fine. The VET08 Table 1 and US Food and Drug Administration Center for Veterinary Medicine Approvals (original agenda item #16) was removed and tabled for a future meeting (tentatively set for June 2019), and the Gene Nomenclature discussion (original agenda item #15) was moved to the end of the meeting.

Item	Description
13.	**CLSI Update** Mr. Fine welcomed everyone and gave updates on and thanks to CLSI staff for their support of the subcommittees. Mr. Fine gave updates on the VET01 Free website-use statistics as evidence of the important work being done by the VAST Subcommittee: **Year** / **Unique Users** / **Unique Page Hits** 2016 / 1,300 / 33,000 2017 / 2,300 / 53,000 2018 / 5,500 / 112,000 Mr. Fine also congratulated CLSI VAST Subcommittee advisor Dr. Fritsche, recipient of the 2019 John V. Bergen Excellence Award (to be presented on Sunday, 27 January 2019), which is presented annually to an outstanding volunteer or group of volunteers in recognition of advances in CLSI organizational directives and objectives, through unique and significant contributions. Dr. Fritsche has long served on the VAST Subcommittee and serves on many of the VAST Subcommittee's WGs, and he also serves as a member of the CLSI Consensus Council, on the Subcommittee on Antifungal Susceptibility Testing (AFST), and on the CLSI Subcommittee on Antimicrobial Susceptibility Testing (AST) and many of its WGs.
14.	**WG on Editorial/VAST Breakpoint Tables (VET08):** Mr. Sweeney went over VET08 comments tabled from before the June 2018 publication of the VET08, 4th edition and comments received after publication. Ms. Moon displayed the comment table with solutions proposed to some of the comments by the VET08 WG. The biggest change would be reorganizing each table in the Table 2 series (2A-2J) by animal species, then by drug or drug class for clinical veterinary laboratories. Ms. Marchand asked why are laboratories going through AST reports when manufacturers program their equipment to have that information? Dr. Diaz-Campos mentioned that the equipment that a lot of veterinary laboratories use does not have updated software that includes the most current CLSI breakpoints so the AST reports need to be reviewed and manually changed before going out to the customers. Manual methods are also used. Dr. Fritsche and Mr. Bade talked about use of the tables either by animal or by drug class, both could be useful depending on the project. Dr. Fritsche brought up derivative products – an equine, a dog, a cat document as separate handouts or wall posters for laboratories (**Action Item**). A proposal was made to modify VET08 Tables 2A-2J reorganized by bacterial species then by animal species, and share with 4-5 laboratories for beta-testing and feedback before proceeding with full editing required for reorganization (**Action Item**).
	A straw poll was taken to accept the proposal to to modify VET08 Tables 2A-2J reorganized by bacterial species then by animal species, and share with 4-5 laboratories for beta-testing and feedback. **Straw vote results: 8-accept, 0-reject, 0-abstained, 4-absent**
	Another topic of discussion was to edit Table 1 to include additional categories for antimicrobial agents such as ceftazidime and minocycline in dogs, which have breakpoints but you would only use those agents if there is known resistance to other antimicrobial options. Dr. Watts mentioned that the original intent for Table 1 was to point out to laboratories that veterinary-specific breakpoints exist and to use those first over human breakpoints. It was not intended to be prescriptive as to what veterinarians should be using. Dr. Fritsche suggested that we add a 5th category – Veterinary-specific Breakpoints, selectively test, selectively report. Dr. Burbick mentioned that she uses a table from M100 because it goes through a list of antimicrobials that should be used to never used and she uses that table as a basis to cascade her reports.

Summary Minutes	
Item	**Description**
14. (cont'd)	**WG on VET08 (continued)** Dr. Watts pointed out that if we take the steps to do a tiered approach to Table 1, then you essentially put together a formulary and does this group want that responsibility; he suggested a better approach might be adding an appendix with examples rather than building a formulary. Dr. Fritsche and Dr. Sinnott-Stutzman mentioned VET09 examples and point to that document. Dr. Fajt explained that the VET09 examples do not quite touch on this issue and agreed with Dr. Watts that we need to be very careful about putting together a formulary - this is a global document and there are many issues to consider (labeling in the United States vs. other countries, local issues with antimicrobial use, etc.). Dr. Diaz-Campos floated an idea of publishing an outreach document or two from the Education WG to discuss how to use the VET09 and VET08 documents. Dr. Fritsche discussed the issue with methicillin-resistant *Staphylococcus pseudintermedius* (MRSP) and other issues, where we now have breakpoints for other choices, how do we guide users in how to use these breakpoints. There was discussion of how many antimicrobial agents that laboratories include on their reports and that veterinarians push for all the information included in what they ordered. The veterinarians may also want to know if what they prescribed before testing is going to cover the animal's pathogen. Dr. Turnidge talked about this very discussion happening 20 years ago on the human side and there is a responsibility to users to put this information together. The final point made was to add a new row to Table 1 to include veterinary-specific breakpoints to selectively test and selectively report. VET08 WG action items were recorded in the comment table (see Attachment 5). Comment #14 – Ms. Moon drafted a comment (see M100 comment but leave off carbapenem). A subgroup of the VET08 WG was formed for revising VET08, Table 1, with Dr. Sinnott-Stutzman serving as Subgroup Chairholder, Dr. Burbick volunteered to serve as recording secretary, with volunteers to serve as members including Dr. Fajt, Dr. Lawhon, Mr. Sweeney, Dr. Papich, and Dr. Diaz-Campos. An announcement will be circulated to the VAST Subcommittee for any additional volunteers for the new VET08 WG Subgroup on VET08, Table 1 to be open until 5 days after the US federal government shutdown ends (**Action Item**). The VET08 WG and the VAST Subcommittee did not yet review and respond to all VET08 Consensus Comments, so the VET08 WG will meet again to respond to all Consensus Comments received on the current VET08, 4th edition, before the June VAST Subcommittee meeting (**Action Item**).
15.	**GWG Breakpoint Informational Update: Chloramphenicol in Dogs** Dr. Langston presented slides on chloramphenicol in dogs. Mississippi State University uses it a lot for dogs with *Enterococcus faecalis* or *S. pseudintermedius* infections that are MRSP. What do we do about pharmacodynamics (PD) for chloramphenicol? PD in dogs is based on very old studies with no information on assay validation, but the breakpoints show similarities to current human breakpoints, and chloramphenicol seems to be working clinically. Results of the discussion was to keep chloramphenicol as is, ie, using the human breakpoints, staying on the lookout for funding of a new pharmacokinetics (PK) study with modern methods and a case study with minimal inhibitory concentration (MIC) data.
16.	**WG on Bovine Mastitis Interpretive Criteria (BMIC)** Dr. Watts provided an update on the BMIC WG, which met yesterday, first presenting a brief history of the BMIC WG development of an appendix for the CLSI guideline VET02 and now the BMIC WG will continue with the charge to assist sponsors with bringing forward new mastitis breakpoints to the VAST Subcommittee. The BMIC WG agreed to operate in a GWG-role, specifically as a primary reviewer role): • For those compounds that have a sponsor, the BMIC WG would assist in presentation to the VAST Subcommittee • For those compounds that don't have a sponsor, the BMIC WG would present the data to the VAST Subcommittee in the same manner as the GWG and the (previous) sponsor would be notified prior to review by the BMIC WG (however, the GWG does not notify sponsors so this may not be required) • Dr. Watts would not vote on any products approval

Summary Minutes	
Item	**Description**
16. (cont'd)	**WG on BMIC (continued)** Dr. Watts went through a list of current agents for consideration, first acknowledging that efficacy for Dry Cow Treatment (DCT) is better than Lactating Cow Treatment (LCT), therefore the BMIC WG has agreed to use LCT over DCT, if presented. Perhaps cephalothin as the class representative could be removed from other testing (VET08) if a mastitis breakpoint is approved. This could be possible as cephalexin is now used for canine testing. The WG will work on cefoperazone and cephalexin-kanamycin first (previous sponsor presented breakpoint documents to CLSI-VAST) to review and refresh, then the WG will work on 1st generation cephalosporins and cloxacillin. The current plan is to adjust the current BMIC WG presentation for cefoperazone and present to the BMIC WG for electronic vote. The BMIC WG will then present cefoperazone breakpoints to the VAST Subcommittee in January 2020 (**Action Item**). In additional discussion, Ms. Marchand mentioned the need for disk diffusion zone diameters (not MICs) for oxacillin in mastitis. Dr. Watts agreed that disk diffusion is very important to mastitis antimicrobials since most mastitis pathogens are tested by disk diffusion in laboratories and on-farm laboratory testing.
17.	**Veterinary Fastidious Media (VFM) WG** Mr. Bade presented an update for the VFM WG: • VFM history and summary over the last 4 years • 7 labs testing to generate data for the MHF-Y media (to replace VFM): panels shipped to labs in mid-December and 4 have completed the testing, with 3 laboratories still working on it • Discussed the overall impression of the media to date; all labs felt the MHF-Y is superior to VFM • Would labs use it…YES! • Presented some prelim data, then there was a discussion on when it will be available to use and be approved and recommended by VAST Subcommittee In final results, there will be inconsistencies between the number of drugs tested due to penicillin QC ranges and an additional panel needing to be created (not all labs could test all 3 panels). Ms. Traczewski pointed out that frozen panels were used in initial VFM WG testing to select new media to test and for this current study of VFM vs. MHB-Y dehydrated panels were used due to the cost (frozen panels were more expensive). The CLSI recommendation is to use frozen panels for method validation. Discussion about timelines took place. The study needs to be completed, presented to the VAST Subcommittee, and the method needs to go in the next revision of the VET01, which is currently scheduled for review in 2023, and the next revision of the VET08, which is tentatively projected for 2020. Need to talk to sponsors around work to present revised breakpoints. The VFM WG would also like to work with CLSI staff on the process for revising the VET01 with new methodology and media before the standard 5-year review and the next VET01 projected review/revision date (**Action Item**).

Summary Minutes	
Item	**Description**
18.	**WG on Aquatic Animals: Presenter - Dr. Claire Burbick (Secretary)** Dr. Burbick gave an update report for Dr. Ron Miller on the WG on Aquaculture AST Methods (VET03 WG) and the standing WG on Aquatic Animals (AWG), including the current VET03 WG roster, the currently published CLSI aquaculture documents, and the current task of the AWG, to update the VET03/04-S2 supplement as VET04S concurrently with the merging of the methods guidelines, CLSI documents VET03-A and VET04-A2, as CLSI guideline VET03. Dr. Burbick reviewed the VET03 process timeline and key updates in the merged new guideline. Dr. Burbick then went through the VET03 WG-Draft comments - most were editorial for consistency and clarity. One comment that Dr. Miller requested be discussed with the VAST Subcommittee was whether the VET03 methods document should be a standard or a guideline. Ms. Marchand suggested that is stays a guideline due to all the different temperatures and bug to bug differences. Dr. Burbick will share that information with Dr. Miller, and the document will most likely stay a guideline at this revision. Dr. Miller also found a problem with the definition previously agreed on for use in all VET documents for **interpretive categories**, which currently does not account for the use of the ECV interpretive categories of wild-type (WT) and non-wild-type (NWT). A proposed resolution to this issue with the **interpretive categories** definition for VET documents will be sent to the VAST Subcommittee following this meeting (**Action Item**) before the VET03 revised draft document can be submitted to go through the full CLSI editorial process to be prepared for the 60-day Proposed Draft vote (**Action Item**). The VET04 supplement revision has not yet been worked on due to the US federal government shutdown but it does not have to go through the full editorial process before the vote. For supplements, only a 21-day vote is required but because it is being revised concurrently with the VET03 methods guideline, it will be posted for the same 60-day review period (**Action Item**).
19.	**Education WG Report** Dr. Diaz-Campos accepted the nomination to serve as Education WG chairholder and presented slides for the Education WG, including the current roster. Dr. Diaz-Campos reported that the first item of business for the Education WG to accomplish is publishing a report entitled "Advice for researchers and reviewers, with writing assignment deadlines in Febuary 2019 to send to the Education WG for feedback and final submission for publication in the end of March 2019. Additional activities include: • Conducting outreach activities and making the CLSI VAST Subcommittee slide set developed in Fall 2018 available to Education WG members • Encouraging participation in the work to be done by the VAST Subcommittee to generate new entries in VET01/VET08S, and the VET03/VET04S • Pursuing AAVLD – CLSI collaborative opportunities for educational activities and feedback from laboratories • Using the CLSI Outreach Working Group (ORWG) of the AST Subcommittee as an example to deliver information and communicate with VET document users to - Deliver information about antimicrobial stewardship - Give case examples - Give examples of using new breakpoints - Give examples of using supplemental, screening, surrogate agent, and equivalent agent testing - Create an outreach newsletter like the AST News Update (at https://clsi.org/media/2962/clsi_ast_newsupdate_vol4issue1_jan2019_final.pdf) Dr. Diaz-Campos requested that the VAST Subcommittee be added to the AST News Update mailing list (**Action Item**), and also that VET09-marketing and outreach suggestions made by the VAST Subcommittee be forwarded to the Education WG (**Action Item**).

Summary Minutes	
Item	**Description**
20.	**Gene Nomenclature Issue** Dr. Lubbers presented slides from folder 10 and requested a vote of support to move forward with a formal request to standardize gene nomenclature in CLSI documents. Dr. Turnidge questioned if all journals were standardized in gene nomenclature and Dr. Lubbers responded that for the most part, yes but not fully. If approved by the VAST Subcommittee, Dr. Lubbers will submit a formal request to the CLSI Expert Panel on Microbiology, the Expert Panel on Molecular Methods, and the AST Subcommittee leadership (**Action Item**). Dr. Turnidge volunteered to talk with some of the AST experts to float this idea (**Action Item**).
	A motion was made by Dr. Xian-Zhi Li and seconded by Dr. Shryock to accept the proposal to move forward with a formal request to the CLSI Expert Panel on Microbiology, the Expert Panel on Molecular Methods, and the AST Subcommittee leadership. **Vote on the Motion: Passed (8-accept, 0-reject], 0-abstained, 4-absent)**
	Ms. Moon mentioned that if when 'standardizing' gene nomenclature there are nuances to naming genes differently, there will be a need for VET DDCs to draft a "list of genes" named in each document showing exactly how they should be written, so that project managers and all editors will have a reference to access at the various stages of editing (**Action Item**).
21.	**Other Business** In other business, the subcommittee discussed 3 topics: 1) How should CLSI veterinary-specific breakpoints approved at meetings be communicated? • It can be stated that a new veterinary-specific breakpoints was approved at meeting and reference the meeting minutes • Breakpoints are not official, however, until they are published in the next revision of the applicable document • For example, ceftazidime breakpoints for dogs will publish in the next revision of the VET08 (5th edition), tentatively projected for publication in June 2020 2) Dr. Hunter had suggestions for spreading the word on veterinary-specific breakpoints and related information: • Moving the CLSI Related Materials information at the end of CLSI documents to the beginning of the documents (**Action Item**) • Adding a folder in CLSI Exchange for the Subcommittee on VAST named "Toolkit" where VAST Subcommittee resources for use will be available (**Action Item**). - Dr. Papich requested the CLSI VAST presentation (from Fall 2018) be uploaded to the new "Toolkit" folder in CLSI Exchange (**Action Item**) 3) Ms. Marchand brought up the need for poultry AST because, with no breakpoints, people think poultry is raised antibiotic-free, so there is no need for testing but testing is needed. Dr. Langston mentioned the poultry AST panels use a combination of human breakpoints and "User defined" breakpoints and the PK/PD would be very hard to do. Dr. Lubbers thought that following the aquaculture documents would be the best route forward, ie, putting together ECVs. Would any information be available to start that route? Dr. Langston said that the poultry industry doesn't think there is a problem. Dr. Shryock also talked about the shortage of poultry veterinarians and different nuances with infectious disease in poultry – intestinal, synovial – if you eliminate those what's left and how do you test for and collect samples – there are many issues. Maybe some information could be added in VET06, starting with putting together a list of pathogens, if interested. Dr. Lubbers will talk to poultry labs to see if AST breakpoints are needed (**Action Item**).
	Meeting Wrap-up and Planning • Dr. Lubbers thanked all participants for their hard work and dedication to the subcommittee and WGs. • The next meeting of the VAST Subcommittee is tentatively scheduled for **Friday – Saturday, 14 – 15 June 2019 in Dallas, Texas**.
22.	The meeting was adjourned at 2:00 PM US EST.

ACTION ITEMS 2019			
No.	**Description**	**Responsibility**	**Due Date**
1.	Send "Save the Date" for Friday-Saturday, 14-15 June 2019 VAST Subcommittee meeting in Dallas, Texas	L. Moon	28 Jan 2019
2.	Continue progress on the issue of breakpoints for topical antimicrobial agents.	J. Watts, M. Papich, R. Hunter	14 Jun 2019
3.	Post the final GWG canine-specific breakpoints for ceftazidime the VAST Meeting Files.	L. Moon	14 Jun 2019
4.	Send canine ceftazidime breakpoints and comment proposal to VAST Subcommittee members not able to attend the January 2019 meeting.	L. Moon	(when US government reopens)
5.	VAST Subcommittee members vote on canine ceftazidime breakpoints.	M. Fielder M. Martinez S. Simjee D. Trott	(5-days after US government reopens)
6.	Pending VAST Subcommittee approval, add canine-specific ceftazidime breakpoints in Tables 2A and 2B.	M. Sweeney L. Moon	31 Aug 2019
7.	Update ceftazidime related tables including QC tables with data from M100, diluents, the glossaries and abbreviations, Appendix A (unusual resistance), front matter table with newly-approved veterinary-specific breakpoints, and Appendix E1.	M. Sweeney L. Moon	31 Aug 2019
8.	Review other veterinary-specific breakpoints set by the GWG to determine whether other GWG breakpoints for *E. coli* should be changed to *Enterobacteriaceae* or left as *E. coli*	M. Papich M. Sweeney	31 Aug 2019
9.	Because there is no CLSI VAST-approved AST method for *Rhodococcus spp.*, this might be considered for inclusion in CLSI supplement VET06 (not a standard).	M. Traczewski M. Sweeney	Jan 2020
10.	Based on input from the VAST Subcommittee, update VET09-Subcommittee Draft document.	V. Fajt	31 Jan 2019
11.	Document Development Committee (DDC) on Understanding AST Data in Veterinary Settings (VET09) final approval of VET09-Subcommittee Draft comment resolution and updated VET09 draft document	Forward to VET09 DDC	(5-days after US federal govt fully reopens)
12.	VET09-Subcommittee Draft comment resolution approval by VAST SC commenters	VAST SC members and advisors who commented on the VET09-SC Draft Document	Early- to mid-Feb 2019
13.	Submit VET09 draft document to go through full CLSI editorial process.	L. Moon	1 Mar 2019
14.	Forward subcommittee suggestions for VET09 report marketing and outreach efforts, including webinars with continuing education (CE) credits, a social media campaign, and promotion to include in veterinary medical school libraries, to CLSI Marketing	L. Moon V. Fajt	1 Mar 2019
15.	Suggest possible new derivative products for VET08, eg, an equine, a dog, a cat document as separate handouts or wall posters for laboratories	M. Sweeney M. Traczewski	31 Aug 2019
16.	Send announcement of VET08 WG Table 1 Subgroup to VAST Subcommittee (for any additional volunteers who were not at the meeting)	L. Moon	28 Jan 2019
17.	Add new VET08 WG Table 1 Subgroup volunteers (who are not currently on the VET08 WG) to the VET08 WG roster.	L. Moon	4 Feb 2019

ACTION ITEMS 2019			
No.	**Description**	**Responsibility**	**Due Date**
18.	Revise VET08 Tables 2A through 2J organized by animal species for review and input by beta-testing laboratories.	M. Sweeney L. Moon	25 Jan 2019
19.	Send mocked-up tables to beta-testing laboratories.	D. Diaz-Campos C. Burbick	1 Feb 2019
20.	Report back to VET08 WG on beta-testing review.	D. Diaz-Campos C. Burbick	1-16 Mar 2019
21.	VET08 WG meet to respond to all Consensus Comments and additional comments received on the current VET08, 4th edition	M. Sweeney M. Traczewski L. Moon	31 Mar 2019
22.	The BMIC WG will present cefoperazone breakpoints to the VAST Subcommittee in January 2020.	J. Watts	13 Dec 2019
23.	Explore options for publication of VFM-replacement media methodology revision before 5-year review.	B. Lubbers CLSI Staff	1 Jun 2019
24.	Send a proposed resolution to resolve the issue identified by the VET03 WG with the **interpretive categories** definition for VET documents.	R. Miller B. Lubbers L. Moon	Early- to mid-Feb 2019
25.	Prepare and submit the VET03 revised draft document to go through the full CLSI editorial process to be prepared for the 60-day Proposed Draft vote	L. Moon R. Miller	1 Mar 2019
26.	Revise the VET04S (aquaculture supplement) for distribution with the June 2019 VAST Subcommittee meeting materials.	R. Miller AWG L. Moon	17 May 2019
27.	Submit the VET04S for Subcommittee Draft reviewing, voting, and/or commenting at the same time as the VET03 Proposed Draft reviewing, voting, and/or commenting period (projected to start in June 2019).	L. Moon	Early- to mid-June 2019
28.	Add the VAST Subcommittee to the AST News Update mailing list.	D. Diaz-Campos L. Moon	1 Jun 2019
29.	Forward outreach suggestions made by the VAST Subcommittee to the Education WG	L. Moon	1 Jun 2019
30.	Submit a formal request to standardize gene nomenclature in CLSI documents to the CLSI Expert Panel on Microbiology, the Expert Panel on Molecular Methods, and the AST Subcommittee leadership.	B. Lubbers L. Moon	14-15 Jun 2019
31.	Informally discuss standardizing gene nomenclature with AST Subcommittee members and advisors.	J. Turnidge	14-15 Jun 2019
32.	Draft a "list of genes" named in each VET document being developed, showing exactly how they should be written, so that project managers and all editors will have a reference to access at the various stages of document editing.	L. Moon All VET DDCs	13 Dec 2019
33.	Submit idea to consider moving the CLSI Related Materials information at the end of CLSI documents to the beginning of the documents.	CLSI Staff	13 Dec 2019
34.	Add a folder in CLSI Exchange for the Subcommittee on VAST named "Toolkit" where VAST Subcommittee resources for use will be available	L. Moon	1 Mar 2019
35.	Upload the CLSI VAST presentation (from Fall 2018) to the new "Toolkit" folder in CLSI Exchange.	L. Moon	1 Mar 2019
36.	Talk to poultry labs to see if AST breakpoints are needed	B. Lubbers	14 Jun 2019

Respectfully submitted,

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