Head at the University of Nevada at Reno. As Dean, Dr. Thawley had a strong commitment to outreach at the College and saw the Leman Conference as a great opportunity to help the swine industry. He encouraged faculty in their efforts to build a quality program each year and provided the staff to support a conference of this size. He will be remembered for his commitment to the growth and success of the Allen D. Leman Swine Conference.

Regardless of all the efforts previously mentioned, you, the individuals who attend the Leman Conference, are the most important reason for success. Without your presence, there would be no need for this meeting. Your commitment to your education brings you here. You have challenged yourself and others to be better. We want to meet that challenge.

Thank you for attending the 1998 Allen D. Leman Swine Conference. Please feel free to suggest ideas to improve future conferences.

— Charles H. Casey, DVM

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1998 Allen D. Leman Swine Conference
Minimum Inhibitory Concentration determination for ceftiofur, spectinomycin, and lincomycin/spectinomycin 1:2 against *Actinobacillus suis* and *Haemophilus parasuis*.

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Minimum Inhibitory Concentrations (MIC) are of importance in therapeutic selection, dose determination and retreatment interval. MIC₉₀ is the concentration of the antibiotic required to inhibit growth of at least 90% of the isolates tested in the laboratory. The MIC₉₀ of a large number of clinical isolates can indicate unique in vitro activity of a particular antibacterial against a specific bacterial species. MICs are also used by diagnostic laboratories to report in vitro results of susceptibility testing. The interpretive categories for susceptibility testing are reported as susceptible, intermediate or resistant. Breakpoint concentrations approved by the National Committee for Clinical Laboratory Standards (NCCLS) are based on three criteria: MIC, pharmacokinetics, and in vivo efficacy data for each individual antibacterial agent.

**In vivo Trial:** Isolates of two emerging swine pathogens, *Actinobacillus suis* (*n=77*) and *Haemophilus parasuis* (*n=76*) were tested to determine the MIC₉₀ of ceftiofur, lincomycin and lincomycin/spectinomycin against these pathogens. The testing, done at the Iowa State University Diagnostic Laboratory, conformed to the guidelines established by NCCLS. The organisms used were isolated from infected swine in Iowa, North Carolina, California, and Indiana. Ceftriaxone was highly active in vitro against the strains of *A. suis* and *H. parasuis* tested with MIC₉₀ of ≤0.06 µg/mL against both swine pathogens. Spectinomycin was slightly more active against *H. parasuis* (MIC₉₀ = 8.0µg/mL) than against *A. suis* (MIC₉₀ of ≤32.0 µg/mL). The lincomycin/spectinomycin (1:2) combination was also slightly more active against *H. parasuis* strains (MIC₉₀=2.0/4.0µg/mL) than against the strains of *A. suis* (MIC₉₀=8.0/16.0 µg/mL). In conclusion, ceftiofur was highly active against the strains of *A. suis* and *H. parasuis* tested; spectinomycin and the lincomycin/spectinomycin combination demonstrated moderate activity in vitro.

**Discussion:** NCCLS approved breakpoints for ceftiofur have been determined in swine against *Actinobacillus pleuropneumoniae*, *Pasteurella multocida*, *Streptococcus suis*, and *Salmonella choleraesuis*. They are ≤2 µg/mL (susceptible), 4µg/mL (intermediate) and ≥8 µg/mL (resistant). The MIC₉₀ determined for *H. parasuis* and *A. suis* in this trial are similar to those for *P. multocida* and *A. pleuropneumoniae* indicating that infections of *H. parasuis* and *A. suis* should respond to the currently recommended dosage of ceftiofur.

NCCLS approved breakpoints for lincomycin have been determined in swine against streptococci as ≤0.25 µg/mL (susceptible), 0.5µg/mL (intermediate) and ≥14 µg/mL (resistant). For organisms other than streptococci, the breakpoints are ≤0.5 µg/mL (susceptible), 1-2µg/mL (intermediate) and ≥4 µg/mL (resistant). Clindamycin is used to test for susceptibility to lincomycin. NCCLS approved breakpoints have not been determined for spectinomycin or the lincomycin/spectinomycin combination for swine pathogens.