CADMS Seminar Series*

Faculty, Staff and Students

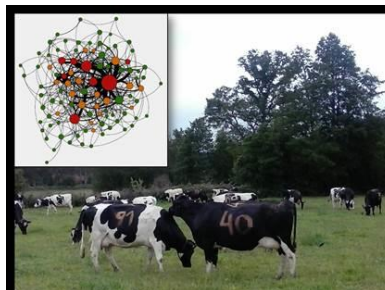School of Veterinary Medicine

You are cordially invited – Mark your calendars!

Title: Social networks in dairy cattle: potential implications for within-group transmission of leptospira spp.

Invited Speaker: **Inès de Freslon**
PhD Student
Universidad de Valdivia, Chile

The contact structure within animal groups may influence the dissemination of infectious diseases that can be transmitted by direct contact. For those diseases, the probability of infection of an individual might be influenced by its specific attributes (e.g. age and sex) and those he is in contact with, and by the characteristics of those interactions. Cattle, like the majority of social animals, have a heterogeneous contact structure. However, little is known about their interaction patterns. Here, we study the social networks of a group of dairy cows (n=100) and two groups of dairy calves (n=23 and 33), based on three behaviors of risk for the transmission of *leptospira spp.*: sniffing, licking and rubbing face on the genital area of another animal. Behavior sampling method, with all-occurrences recording, was used to register these behaviors. We used exponential random graph modeling to analyze the networks. We incorporated as predictors in the cows network models the calving number, age and reproductive status, and in the calves networks, the sex and age. Our results highlight the importance of individual attributes and how they can shape the contact structure of a group.

1:00 p.m. – 2 p.m., 1043 Valley Hall

Friday, October 27th, 2017

*Organized by the Center for Animal Disease Modeling and Surveillance (CADMS)

If you have any questions or comments please contact Beatriz Martinez Lopez (beamartinezlopez@ucdavis.edu)