Course Post ISVEE 10

TITLE: “Tools for Infectious-Disease Epidemiology”

OVERVIEW: The course contents are distributed among three major topics: diagnostic methods, infectious-disease models and risk assessment. Case studies and examples specifically include infectious diseases important in food safety (E. coli, Salmonella spp., Listeria spp.).
This course is designed for veterinarians, other animal-health professionals, and graduate students who need proficiency in infectious-disease epidemiology. Participants are expected to come to the course with a basic understanding of infectious-disease biology and diagnostic-test terminology.
After this course, participants will be able to:
1) Contribute to the design of programs for disease control/prevention
2) Interpret/evaluate protocols and literature on these topics.

PLACE: Universidad Austral de Chile, Valdivia

PARTICIPANTS: 15 (min) – 25 (max)

DATES: November 24-26 (3 days)

COSTS (including lunches and handouts):

ISVEE participants:	US$110
Non-participants of ISVEE:	US$125
Postgraduate students (PhD or MSc):	US$75

INSTRUCTORS

Dr. Hollis N. Erb (Cornell University)
Ynte H. Schukken (Cornell University)
http://qmps.vet.cornell.edu/web%20bios/schukken.htm
Dr. Yrjö Gröhn (Cornell University)
http://www.people.cornell.edu/pages/ytg1
Dr. Daryl V. Nydam (Cornell University)
Dr. Hussni Mohammed (Cornell University)
Dr. Lorin D. Warnick (Cornell University)

Dr. Gerdien van Schaik (Universidad Austral de Chile)
Potential replacement faculty
Dr. John McDermott (University of Guelph)

Day 1, Hollis Erb & Lorin Warnick:

Diagnostic tests
Test evaluations, sensitivity & specificity, combining tests, independence of tests. Animal vs. herd-level diagnostics. Freedom from disease, decision-tree analysis.

Day 2, Ynte Schukken & Yrjö Gröhn:

Infectious Disease Modeling
Reproduction ratio, SIR models, simple spreadsheets. Case study.
Estimation methods for the reproduction ratio. Biology and mathematics of different types of models. Designing vaccination programs, herd immunity. Case study.

Day 3,Hussni Mohammed & Daryl Nydam:

Risk Assessment
Concepts of risk assessment.
Risk-assessment tools: qualitative and quantitative methods in risk assessment. Dose-response relationships. Demonstration of concepts with the @risk program. Development of risk models.