



Greetings from the Center for Outcomes Research and Epidemiology (CORE). On behalf of our team, it is a pleasure to share some news with you – our colleagues, collaborators, and supporters. Since we are frequently asked – What research is CORE doing? – we thought we would focus this newsletter on the projects led by the primary CORE team. As you can see below, we are engaged in quite a variety of animal health and public health issues. If you have any questions or interest in these projects, or other opportunities to engage with our research and training programs, please contact us!

David Renter, CORE Director

## Projects Led by CORE Primary Faculty

- **Promoting antimicrobial stewardship through improved knowledge on the subset of feeder cattle in which the value of metaphylaxis-use is most uncertain.** Drs. Natalia Cernicchiaro and David Renter with funds from the Foundation for Food & Agriculture Research and industry.
- **Assessing the risk of emergence, transmission and establishment of the Japanese encephalitis virus in the U.S.** Dr. Cernicchiaro in collaboration with USDA ARS NBAF scientists.
- **Reassessing the risk of Japanese encephalitis virus introduction to and transmission in the U.S.** Dr. Cernicchiaro with funds from the Swine Health Information Center.
- **Comparative review of emerging and endemic flaviviruses in the U.S.: Revisiting the role of vectors, hosts and the environment.** Dr. Cernicchiaro with funds from the Swine Health Information Center.
- **Quantifying how whole-dairy and largescale feedlot application of a pre-harvest fermentation product reduces *Salmonella* in lymph nodes.** Dr. Cernicchiaro with funds from the National Cattleman's Beef Association.
- **Study design and analysis support for companion animal clinical research.** Drs. Cernicchiaro and Andrea Dixon with funds from industry.
- **Auction market biosecurity and risk mitigation for FMD-guidance and planning recommendations.** Dr. Christy Hanthorn with funds from USDA APHIS.
- **Clinical outcomes of feedlot calves with non-resistant and resistant respiratory disease bacteria.** Dr. Renter with funds from industry.
- **Sustainability in beef production systems: Impacts of cattle health, associated production efficiency, and the use of technologies.** Dr. Renter with funds from industry.
- **Kansas State University leadership in cattle feeding sustainability: Driving economic prosperity and GFS in the state of Kansas.** Drs. Renter and Ted Schroeder with funds from the Global Food Systems program and industry.
- **Economic analyses of commercial feedlot trials on health and performance interventions.** Drs. Renter and Dixon with funds from industry.
- **Factors associated with feeder cattle prices from the largest cattle marketing network in North America.** Drs. Renter and Glynn Tonsor with funds from industry.
- **Longitudinal surveillance and biosecurity practice: Effect on cattle movement risk in an FMD outbreak.** Dr. Michael Sanderson with funds from USDA APHIS.
- **Update of swine contact parameters for ISP FMD and ASF models.** Dr. Sanderson with funds from USDA APHIS.
- **FMD transmission risk of cattle movements to and from auction markets - Quantitative risk assessment and development of an on-line risk calculator.** Dr. Sanderson with funds from USDA APHIS.
- **Biosecurity for cattle operations: Quantitative risk estimation of FMD transmission following cattle movements during an outbreak.** Dr. Sanderson with funds from USDA APHIS.
- **Simulation modeling of FMD outbreaks in livestock in the U.S.** Dr. Sanderson with funds from USDA ARS.

## CORE Updates

**Veterinary Research Scholars:** CORE hosted two veterinary summer students. Abdulafees Hamzat worked under Dr. Cernicchiaro's mentorship on "Assessing the risk of introduction, transmission, and establishment of the Japanese encephalitis virus in the U.S." Deanna Gennett, Veterinary Student Research Fellow, worked with Dr. Renter on "Incorporating sustainability metrics in beef industry research."

**Advisory Council:** Dr. Alfonso Clavijo, Director of USDA ARS National Bio and Agro-Defense Facility, joined the CORE Advisory Council. Advisory Council members are [here](#).

**CORE Team:** Ashley Thackrah, MPH, joined CORE at the beginning of the year as the new Project Coordinator. Drs. David Edache, postdoctoral fellow, and John Ekakoro, research associate, also joined CORE this year. Torre Dunlea is a new PhD student advised by Dr. Sanderson. Check out our Staff & Students page [here](#).

Dr. Hannah Seger defended her PhD and is currently a postdoctoral fellow at USDA-ARS in Ames, Iowa. Check out our Alumni page [here](#).

Dr. David Renter was awarded a 5-year renewal for the Dr. Robert MacDonald Professorship.