



Donnelly Centre
for Cellular + Biomolecular Research
UNIVERSITY OF TORONTO



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Special Seminar

“Leveraging vaccine science to help meet the Sustainable Development Goals”



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Abstract:

The projected growth of the human population over the next few decades and an increased demand for animal sourced food because of income growth and urbanization provides several opportunities for science to help achieve some of the United Nations Sustainable Development Goals by increasing food production, especially in low to middle income countries (LMICs). Unfortunately, livestock productivity in LMICs is low, as there are many biotic and abiotic challenges faced by small holder and pastoral farmers who produce the bulk of food that is consumed. This productivity gap could be reduced by institutional and policy changes, and by improving animal breeds, their health and quality of feed.

Vaccines represent one of the most effective and sustainable inventions for disease control, especially in under-resourced agricultural systems. Through the ILRI Vaccine Platform (ILVAC), ILRI's Biosciences group is building a hub for research dedicated to developing vaccine-based solutions to reduce disease burdens that limit livestock productivity in smallholder and pastoral farming systems in LIMCs. An example of vaccine development research on a tick-transmitted protozoan called *Theileria parva*, which usually causes a lethal disease in cattle called East Coast fever (ECF) will be presented. Technologies that identify and generate parasite-specific neutralizing antibodies and MHC class I-restricted cytotoxic T lymphocytes (CTLs) are of particular interest as both arms of the bovine immune response play a role in mediating immunity to ECF.

Monday, May 27, 2019 | 2:00 pm

The Donnelly Centre Red Seminar Room

Host: Sachdev Sidhu, PhD