

A new approach to old problems

Society for Theriogenology members, researchers from Washington State University and University of Calgary, studied miRNA regulation of genes in bovine uterine disease, opening new avenues to study functional genomics in the search for better diagnostic and treatment options.

Drs. Vanmathy Kasimanickam (WSU) and John Kastelic (UofC) recently published their work on bovine metritis in “Scientific Reports”, a journal from Nature group (Sci Rep. 2016 Jul 11;6:29509). They detected up or down regulation of several miRNAs involved in various biological processes, including responding to uterine infection, mediating uterine inflammation, and clearing infectious agents and inflammatory products.

MicroRNAs (miRNAs) are non-coding RNAs, regulators of numerous functions, in diverse organisms. Approximately 30% of genes are regulated by miRNAs. They have essential roles in gene expression regulation, at post-transcriptional levels.

“This approach gives us different view of damage across the genome” said Dr. Vanmathy Kasimanickam who is studying miRNA regulation of male and female reproductive functions. “There are emerging evidences of miRNAs expression and function in normal and abnormal conditions. However, detailed investigations are lacking about the global and specific expression profiling of miRNAs and their functionality in the framework of reproductive function”.



Full article is available at <http://www.nature.com/articles/srep29509>



Vanmathy Kasimanickam



John Kastelic