

FACULTY RESEARCH FUND

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Proposal Title: Evaluation of Glycoproteins for Pregnancy Determination in Sheep

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ABSTRACT

On-farm pregnancy detection is an extremely valuable practice in animal production systems. It allows for identification of pregnant or nonpregnant females contributing to informed management decisions. Using commercially available blood pregnancy tests, livestock producers can easily identify pregnant or nonpregnant females in their herds. These tests provide a practical alternative to ultrasonography because they are low cost and do not require specialized equipment or training. Unfortunately, blood pregnancy tests simply provide a yes or no answer to pregnancy status. Ultrasonography, on the other hand, allows for determination of many other factors, some of which include gestation age, fetal sex (male/female), and fetal number (single/twin/triplet). Previous reports that have aimed to characterize changes in PAGs have successfully reported increased PAG concentrations in twin pregnancies versus single pregnancies and have done this using multiple tests including radioimmunoassays and enzymelinked immunosorbent assays. More recently, multiple commercially available tests have been developed. These commercially available tests have been developed to allow for the use of whole blood and provide almost immediate results (30 minutes), allowing producers to perform these tests directly on farm. Therefore, the objective of this study is to investigate if pregnancy status can be determined sooner due to various fetal parameters using commercially available blood pregnancy tests that detect PAGs. This study will provide unique educational opportunities for students out at the university farm and provide preliminary data contributing to future opportunities for collaborative efforts with other universities.