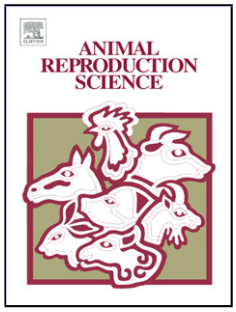

Title: Development of the “waveless” bovine model

Authors: F. Jimenez-Krassel, J.L.H. Ireland, C. Kronemeyer, A. Wilson-Alvarado, J.J. Ireland

PII: S0378-4320(18)30279-3
DOI: https://doi.org/10.1016/j.anireprosci.2018.05.009
Reference: ANIREP 5852

To appear in: *Animal Reproduction Science*

Received date: 26-3-2018
Revised date: 4-5-2018
Accepted date: 10-5-2018

Please cite this article as: Jimenez-Krassel F, Ireland JLH, Kronemeyer C, Wilson-Alvarado A, Ireland JJ, Development of the “waveless” bovine model, *Animal Reproduction Science* (2018), https://doi.org/10.1016/j.anireprosci.2018.05.009

Development of the "waveless" bovine model

Running Title

Waveless bovine model

F Jimenez-Krassel[1], JLH Ireland[1], C Kronemeyer[1], A Wilson-Alvarado[1], and JJ Ireland[1]

[1]Molecular Reproductive Endocrinology Laboratory, Department of Animal Science

Correspondence: JJ Ireland, Rm 1230 Anthony Hall, Department Animal Science, 474 S. Shaw Lane, Anthony Hall, Rm 1230I, Michigan State University, East Lansing, MI 48824-1225, phone: 517-432-1384, FAX: 517-353-1699, email: **ireland@msu.edu**

ABSTRACT

Development of a bovine model without ovarian follicular waves (waveless) and transient increases in gonadotropin secretion during estrous cycles may lead to new methods to more consistently regulate ovulatory follicle growth thereby improving efficiency of embryo transfer. We hypothesized that the GnRH antagonist acyline would inhibit gonadotropin secretion thereby blocking follicular waves, ovarian function and ovulation during estrous cycles of cattle. To test this hypothesis, beef heifers (*n* = 5 per group) were treated twice daily with vehicle (control) or 25 or 50 µg/kg acyline beginning 12 h after GnRH-induced ovulation and ending 21 days later. Each animal was subjected to ovarian ultrasonography for 25 days to monitor number and growth of follicles ≥3 mm