

1145-VF-2793 **Nicole M Panza*** (npanza@fmarion.edu), Department of Mathematics, Francis Marion University, PO Box 100547, Florence, SC 29502-0547. *Modeling Menstrual Cycle Follicle Dynamics with Applications*. Preliminary report.

Ovarian follicle waves have been reported in women by Baerwald et al. (2003). A nonlinear differential equation model representing the hormonal regulation of the menstrual cycle with follicle waves is presented. The model exhibits waves of antral follicles using a Follicle Stimulating Hormone threshold function. The model is used to explore phenomenon such as early menopause and superfecundation. (Received September 25, 2018)