1106-92-1257 **Nicole M Panza*** (nmpanza@ncsu.edu), Department of Mathematics, Box 8205, North Carolina State University, Raleigh, NC 27695-8205, and **James Selgrade** (selgrade@math.ncsu.edu), Department of Mathematics, Box 8205, North Carolina State University, Raleigh, NC 27695-8205.
Modeling Follicle Wave Dynamics in the Menstrual Cycle. Preliminary report.

A model of nonlinear differential equations which represents the hormonal regulation of the menstrual cycle with follicle waves is presented. Such waves have been observed in animals and have been reported in women by Baerwald et al. (2003). Our model exhibits multiple waves of antral follicles during a woman's cycle using a Follicle Stimulating Hormone threshold function. Both 2-wave and 3-wave cycles are simulated and the 2-wave cycle is simulated for both the 5 and 6 hormone models. (Received September 11, 2014)