**Validation of a mathematical model of the bovine estrous cycle for cows with different estrous cycle characteristics**

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**Supplementary** **Table S2**

List of Hill functions1 used in the differential equations of the model (see supplementary table S1) for modeling inhibition and stimulation by other model components. A Hill function is a sigmoidal function between 0 and 1 that switches at a specified threshold from one level to the other with a specified steepness.

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1 E2 = estradiol, P4 = progesterone, GnRH = gonadotropin releasing hormone, Inh = inhibin, OT = oxytocin, OTR = oxytocin receptor, FSH = follicle stimulating hormone, LH = luteinizing hormone, IOF = intra-ovarian factors, PGF2α = prostaglandin2α, CL = corpus luteum size. Foll = follicle size, Ovul. Foll. = ovulated follicle,  *Pit* =pituitary, , *c* = rate constant, *t* = time. *h+* = positive Hill function, *h −* = negative Hill function, *T* = threshold for change of behaviorof the Hill functions, and *m* = maximum value of the switched parameter.