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Interferon-τ Regulates Prostaglandin Release in Goat Endometrial Stromal Cells via JAB1- Unfolded Protein Response Pathway **Revised**

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ABSTRACT

Prostaglandins (PGs) are major products of the uterine endometrium, and they are critical for recognition of pregnancy in ruminants. During the peri-implantation period of pregnancy, interferon tau (IFN-τ) plays an important role in the regulation of endometrial PGs synthesis, but the underlying mechanisms remain poorly understood. In this work, the results demonstrated that IFN-τ increased the $PGE_2/PGF_{2\alpha}$ ratio, up-regulated the expression of JAB1 and activated the unfolded protein response (UPR). Knockdown of JAB1 reduced the $PGE_2/PGF_{2\alpha}$ ratio and inhibited the expression of UPR markers in endometrial stromal cells (ESCs) under IFN-τ treatment. Pre-treatment with endoplasmic reticulum (ER) stress activator thapsigargin (Tg) activated UPR and restored the $PGE_2/PGF_{2\alpha}$ ratio in shJAB1 groups