# Article information:

The Photoperiod Regulates Granulosa Cell Apoptosis through the FSH-Nodal/ALK7 Signaling Pathway in Phodopus sungorus - PMC  
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9774567/>

# Article summary:

1. The photoperiod regulates the follicle development in seasonal reproduction of animals through the HPO axis.

2. This study focused on the structure of ovaries and the development state of granulosa cells under different photoperiods to determine the molecular mechanism of photoperiod regulating follicle development.

3. Results suggest that hormones in the HPO axis affect FSH secretion, participate in regulation of Nodal/ALK7 signaling pathway, and regulate granulosa cell apoptosis, thus affecting ovarian function and seasonal reproduction.

# Article rating:

Appears well balanced: The article presents the information in a reliable and balanced way, without biases and prejudices. The claims made in the article are well supported and, where applicable, all sides of the argument are given opportunity to present their point of view. The article appears trustworthy and reliable.

# Article analysis:

The article is reliable and trustworthy as it provides a detailed overview of how the photoperiod regulates follicle development in seasonal reproduction of animals through the HPO axis. The authors have conducted extensive research on Djungarian hamsters (Phodopus sungorus) raised under different photoperiods to study ovarian status and explore potential mechanisms of follicle development mediated by FSH-Nodal/ALK7 signaling pathway. The results are supported by quantitative real-time polymerase chain reaction and western blotting experiments which provide evidence for their claims. Furthermore, the article does not contain any promotional content or partiality towards any particular point of view, but rather presents both sides equally with an unbiased approach. Additionally, possible risks associated with manipulating animal reproduction are noted throughout the article. Therefore, overall this article is reliable and trustworthy as it provides a comprehensive overview of how photoperiod affects follicle development in seasonal reproduction with evidence to support its claims.

# Topics for further research:

* Photoperiod and seasonal reproduction
* FSH-Nodal/ALK7 signaling pathway
* Djungarian hamsters (Phodopus sungorus)
* Quantitative real-time polymerase chain reaction
* Western blotting experiments
* Manipulating animal reproduction

# Report location:

<https://www.fullpicture.app/item/92224afb9c972616c134052698f2f9f3>