



KEY WORDS

- ✓ PCOS
- ✓ Phoenixin-14
- ✓ ELISA
- ✓ Immunohistochemistry
- ✓ Rat

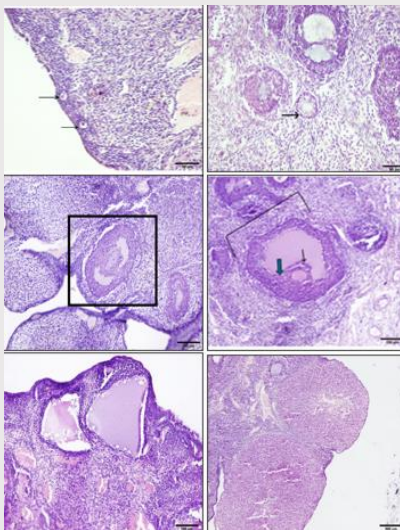
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ENDOCRINE AND METABOLIC EFFECTS OF PHOENIXIN-14 PEPTIDE POLYCYSTIC OVARY SYNDROME MODEL

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THESIS ABSTRACT

This study was carried out to evaluate the effects of chronic Phoenixin-14 (PNX-14) treatment on ovarian and metabolic parameters in an experimental polycystic ovary syndrome (PCOS) model induced by dehydroepiandrosterone (DHEA). The study looked at the effects of PNX-14 treatment for different durations (7 and 14 days), as well as the protective co-administration with DHEA, on ovarian histomorphology, follicular development, granulosa cell proliferation, reproductive hormones, and metabolic parameters. The findings suggest that PNX-14 is a potential neuropeptide that can support follicular development, reduce apoptotic follicle loss, and regulate ovarian functions.

APPLICATION AREAS OF THE THESIS RESULTS

PNX-14 shows that it could be a potential neuropeptide-based treatment candidate in PCOS by preserving ovarian follicular reserve, reducing follicular atresia and cystic follicle formation, supporting granulosa cell proliferation, and regulating ovulatory functions. The findings could provide a foundation for future translational research aimed at developing new biotherapeutic approaches for PCOS treatment, preserving ovarian reserve, and targeting GPR173-mediated mechanisms. However, before clinical use, studies on dosage, pharmacokinetics, efficacy, and safety need to be completed.

ACADEMIC ACTIVITIES

1. Berber, M., Topal, G., Bulut, A., Sevdar Cecen, G., Goren, H., Guney Eskiler, G., Gul, Z., & Gok Yurtseven, D. (2026). Phoenixin-14 ameliorates ovarian morphology in a DHEA-induced rat model of PCOS. *Reproduction & Fertility, 7*(1), RAF250142. <https://doi.org/10.1530/RAF-25-0142>
2. Aghayeva, S., Bulut, A., Aslan, K., & Çakır, C. (2024). Impact of monopronuclear and tripronuclear patterns on ICSI outcomes: Analyzing contributing factors and clinical implications. *Reproductive BioMedicine Online, 49*(Suppl.), 104580. <https://doi.org/10.1016/j.rbmo.2024.104580>