



Original Research Paper

Efficacy of Domperidone as Temporary Contraceptive for Persian Female Cats

Baneen Falih*, Nawras A. Alwan and Eman Aboud Al-Masoudi

Department of Physiology, Pharmacology and Biochemistry, College of Veterinary Medicine, Basrah University, Basrah, Iraq.

Corresponding Author email*: baneen.falih@uobasrah.edu.iq

Abstract

Introduction: In recent years, the practice of rising pets (especially dogs and cats), has become most common, Therefore, the need arose to control the reproduction of these animals, perhaps temporarily, which is the best and safest option for the animal. **Aim:** For this purpose, the research goal to physiological evaluation to use domperidone as temporary contraceptive for Persian female cats. **Methodology:** Eighteen pubertal crossbred queens weighing between (2.4 and 3.2 kg) and aged between (6 and 12 months) uses and divided into two groups; first group (G1) without any treatment served as the control group. Second group (G2) the queens were administration of domperidone at a dose rate (2.2 mg/kg/12 hours). **Results:** The results of clinical observation and physiological changes appeared all female entry into the estrus phase. The non-significantly differences in the initial and final BW differences between control and domperidone groups, While significant increased within groups. Estrogen concentration decrement in treated group also progesterone, LH and FSH hormones decreased statistically in this group compared with control group. Also, lipid profile showed significant decrement in total cholesterol, triglyceride, low density and very low density lipoproteins while high density lipoprotein increased significant than to control group, Prolactin hormone elevation significantly while MDA decreased in group treated with domperidone compared to control group; **Conclusions:** efficacy of domperidone as temporary contraceptive agent in Persian female cats by inducing hyperprolactinemia and suppression reproductive hormones and ovarian activity.

Keywords: domperidone, temporary contraceptive, Persian, female cats.

which in turn reduces LH and FSH production, thereby preventing ovulation and estrus.

Dopamine D₂ receptor antagonists (e.g., domperidone) .Increase prolactin secretion by blocking dopamine D₂ receptors. Elevated prolactin levels are associated with suppression of the hypothalamic- pituitary gonadal axis, leading to reduced GnRH, LH, and FSH secretion and subsequent impairment of reproductive function (Deb *et al.*, 2025) By preventing dopaminergic inhibition of lactotroph cells in the anterior pituitary gland, domperidone, a peripheral dopamine D₂-receptor antagonist, increases prolactin production (Si *et al.*, 2024) Through its effects on the hypothalamic-pituitary-gonadal axis, ovarian function, and breastfeeding, elevated prolactin plays a crucial role in reproductive physiology (Szukiewicz, 2024). This study aims to evaluate the efficacy of domperidone as temporary contraceptive agent in Persian female cats by inducing hyperprolactinemia and assessing its effects on reproductive hormones and ovarian activity.

2. Methodology

2.1 Ethics

The College of Veterinary Medicine's Research Ethics Committee accepted the experimental

1. Introduction

Cats are seasonal polyestrous animals, and ovulation in these species is induced mating. If mating does not happen and ovulation is not induced, cats will eventually return to estrus. During estrus, various behavioral changes such as vocalization, frequent urination, rolling, rubbing against their owner, and an increased desire to escape outdoors can be observed. These symptoms, along with the potential pregnancies resulting from escaping, pose significant challenges for cat owners; (Jassim, 2010; Okur, 2025). It is imperative to understand and explore effective methods of feline reproductive control

Surgical techniques (such as ovariohysterectomy or ovariectomy) can be used to permanently restrict fertility in companion cats. Potential side effects from the procedure could include ovarian remnant syndrome, peritonitis, and bleeding (Karneva *et al.*, 2017). Surgical methods are expensive and result in permanent sterilization. Hormonal methods such as; Progestogens (Synthetic Progesterone) are synthetic analogues of the natural hormone progesterone. They work by exerting negative feedback on the hypothalamic-pituitary gonadal axis, primarily inhibiting the secretion of GnRH,

*Corresponding Author:

Received: 13th July, 2026; Revised: 27th July, 2026; Accepted: 20th August, 2026; Available Online: 2nd September, 2026

(DOI): 10.70102/AEJ.2026.18.4s.50

(HDL-C) *Reagent Kit* (Direct Measurement Method) according to the manufacturer

2.5.4 Low-density & very low density Lipoprotein Cholesterol (LDL-C & VLDL-C): Serum LDL-C and VLDL-C concentrations were calculated according to Ram (1996):

LDL-C mg/dl = TC - [HDL-C + (Triglyceride /5)]
.....Eq.1

VLDL-C = TG/5

2.6 Quantification of malondialdehyde (MDA) assay kits as procedure mentioned by (Draper & Hadley, 1990)

2.7 Data Analysis: Independent t-test Analysis of Variance (ANOVA) was employed to detection statistically differences between treatment groups with the help of the computer package program SPSS (Version 28, SPSS Inc., Chicago, Illinois, USA). mean $\pm$ standard deviation expressed the data were (M $\pm$ SD) at probability $P < 0.05$.

3. Result

Clinical observation; Every day, clinical observations were carried out to keep a careful eye on the physical and behavioral indicators of female cats, with an emphasis on determining when they entered the estrus period. These observations showed clear behavioral and physiological changes, including heightened vocalization during estrus, increased attraction to male cages and interactions, increased sociability with people and other objects, and distinctive walking patterns. They also showed up when the hind quarter and tail were palpated.

3.1 Effect of prolactin stimulators on body weight

The information of results about body weight in cats treated with domperidone; Which appeared non significantly differences in the initial BW, final BW differences between control and domperidone groups. While significant increased ($P < 0.05$) within groups.

Table 1: Effect of prolactin stimulators on body weight in female cats:

Parameter	Groups	Mean	Std. Deviation
Initial BW (Kg)	Control	3.08 Ab	0.54
	Domper	3.26 Ab	0.40
Final BW (Kg)	Control	3.36 Aa	0.43
	Domper	3.50 Aa	0.50

3.2 Effect of prolactin stimulators and on reproductive hormones: The data represented in table (2) shown reproductive hormones affected by these treatments; Estrogen concentration decrement in prolactin stimulators group compared with control group, also progesterone, LH and FSH

methods on September 3, 2025, with approval number (154/37). During the cat breeding season, the current investigation was carried out at the Animal House of Veterinary Medicine. Six months were dedicated to experimentation and duration, while one month was devoted to adaption. The experiment was carried out while cats were reproducing. Eighteen pubertal crossbred queens weighing between 2.4 and 3.2 kg and aged between 6 and 12 months participated in the experiment.

2.2 Experimental Design

Pubertal crossbred queens weighing between 2.4 and 3.2 kg and aged between 6 and 12 months participated in the experiment. The queens were randomly divided into two treatment groups:

Group One (G1): without any treatment to keep as the control group.

Group two (G2): administration of domperidone to the queen orally at a dose rate of 2.2 ml/kg body weight every 12 hours (Jensen *et al.*, 2016)

2.3 Blood Collection for Hormonal Analysis

Approximately two to three milliliters of blood were drawn from each cat on days zero, fourteen, thirty, and sixty. The jugular and cephalic veins were used to draw blood in the manner described below (AL-Dulimy, 2016; Thrall *et al.*, 2022). After an overnight fast, the cats were sedated with intramuscular injections of xylazine (0.15 mg/kg; VMD Livestock Pharma, Belgium) and ketamine (15 mg/kg; Alfasan Woerden, Holland) (Maze *et al.*, 1997). Cotton wetted with 70% alcohol was used to sanitize the middle to lower portion of the jugular vein area. Blood was drawn using a sterile 3, 5-mL disposable syringe with 23-G. The blood samples were removed into plain gel tubes, allowed to sit at room temperature for 30 minutes, and then centrifuged for 15 minutes at 3000 rpm. Before being employed for hormonal analysis, the serum was aliquoted into an Eppendorf tube and refrigerated at -20 °C (Thrall *et al.*, 2022)

2.4 Determination of Serum Reproductive Hormones

Serum concentrations of follicle-stimulating hormone (FSH), luteinizing hormone (LH), estradiol (E₂), Progesterone, Gonadotropin-Releasing hormone (GnRH), and prolactin were measured simultaneously using a chemiluminescent immunoassay (CLIA) technique on an automated chemiluminescence analyzer (Nipigon 8cl, Canada).

2.5 Biochemical measurements

2.5.1 Total cholesterol: It was measured using the *Total cholesterol Reagent Kit (GPO_PAP Enzyme Method)* according to the manufacturer.

2.5.2 Triglyceride: It was measured using the Triglyceride (TC) Reagent Kit (GPO_PAP Enzyme Method) according to the manufacturer.

2.5.3 High Density lipoprotein: It was measured using the *High Density Lipoprotein Cholesterol*

Table 3: Effect of prolactin stimulators on serum lipid pictures in female cats:

hormones decreased statistically in groups treated with prolactin stimulators compared with control group.

Table 2: effect of prolactin stimulators on reproductive hormones in female cats:

Parameters	Groups	Mean	SD
ESTROGEN ng/ml	Control	37.66 A	2.07
	Domper	29.69 B	2.84
PROGESTRONE ng/ml	Control	1.25 B	0.13
	Domper	2.07 A	0.46
	Control	0.14 A	0.05

3.4 Effect of prolactin stimulators on prolactin hormone and MDA

The table (4) sign to the results of prolactin hormone that statistically ($P<0.05$) elevation in group treated with domperidone as compared to the control. MDA is a marker of oxidative stress shown in table (4) that lowering significantly ($P<0.05$) in group of Domperidone comparatively to the control group.

Parameters	Groups	M.	S. D
Prolactin ng/ml	Control	0.43 B	0.03
	Domper.	0.56 A	0.03
MDA μmol/L	Control	29.23 A	2.16
	Domper.	17.92 B	1.39

LH
ng/ml

Parameters	Groups	M	SD
TC mg/dl	Control	66.09 A	10.68
	Domper.	65.59 A	9.21
TG mg/dl	Control	49.13 A	1.72
	Domper.	32.97 B	3.97
HDL mg/dl	Control	49.01A	3.48
	Domper.	39.01B	
VLDL mg/dl	Control	9.82 A	0.24
	Domper.	8.23 B	0.41
LDL mg/dl	Control	22.13 A	2.97
	Domper.	11.50 B	2.48

Table 4: Effect of prolactin stimulators on serum prolactin and MDA concentrations in female cats:

	Domper	0.07 B	0.01
FSH	Control	0.16 A	0.03

3.3 Effect of prolactin stimulators on lipid pictures

The data about serum lipid pictures were listed in table (3), TC appeared non differences between all groups of experiment. While, TG concentration that shown significantly lower than to control groups. The results of HDL lipoprotein reported statistically increment in Domperidone group. Lipoprotein VLDL, also LDL concentrations decrement significantly in treated group Domperidone comparatively to control group.

LH
ng/ml

4. Discussion

4.1 Effect of prolactin stimulators on body weight

The results of the current study showed weight gain in cats treated with domperidone, which may be attributed to the indirect effect of elevated prolactin levels resulting from the inhibition of dopamine D2receptors. Dopamine is the primary inhibitory

after induced ovulation may explain the increase in progesterone. Prolactin has been described as one of the key hormones supporting luteal function. And agreement with (Santos & Silva, 2023) the corpus luteum is the primary source of progesterone in queens, and prolactin contributes to the regulation of luteal function and progesterone production.

The elevation of prolactin concentration may suppress reproductive activity through inhibition of hypothalamic GnRH secretion, resulting in decreased LH and FSH release. Furthermore, the increased progesterone concentration following induced ovulation and corpus luteum formation may exert additional negative feedback on the hypothalamic-pituitary axis, further suppressing GnRH and LH secretion (Silva et al., 2023) who demonstrated that elevated circulating progesterone derived from the corpus luteum or progesterone implants suppresses LH release following GnRH stimulation through negative feedback mechanisms. This result agreement with (de Araújo Silva et al., 2023). A subcutaneous dose of 4 mg/kg of domperidone was used to induce hyperprolactinemia. This resulted in elevated prolactin, which directly impacts reproduction since it prevents the release of LH and FSH. And agreement with (Ahmad, 2025). When a group of rabbits were given the medication Domperidone orally in the form of a syrup at a dose of (0.3) mg/kg three times a day along with food and drink, the concentration of the hormone LH decreased in comparison to the control group. (Yue et al., 2024) During the estrus cycle, PRL inhibition may have an impact on follicle count, gene expression, and reproductive hormone secretion.

4.3 Effect of prolactin stimulators on lipid pictures

The present study demonstrated no significant changes in total cholesterol levels among the experimental groups, suggesting that cholesterol homeostasis remained relatively stable despite hormonal interventions. However, triglyceride levels showed a significant reduction in the prolactin stimulators group, this decrease may be attributed to the effect of elevated prolactin levels induced by Domperidone, which may alter lipid metabolism by enhancing peripheral utilization or reducing hepatic triglyceride synthesis under certain physiological conditions. In contrast, HDL levels were significantly increased in the prolactin stimulators group, which may be linked to the suppressive effect of prolactin on estrogen secretion. Since estrogen plays a crucial role in maintaining HDL levels, its reduction could lead to decreased HDL concentration (Haffner et al., 1993; Feingold, 2026). As estrogen play a key role in enhancing HDL synthesis and reducing its catabolism. Additionally, estrogen deficiency is associated with increased hepatic lipase activity,

regulatory of prolactin secretion, and its inhibition leads to hyperprolactinemia (Puoti et al., 2023; Sim et al., 2024). Physiological evidence suggests that prolactin is effects extend beyond reproductive function to include appetite regulation and energy metabolism. Elevated prolactin levels can lead to increased food intake, altered insulin sensitivity, and enhanced fat storage in peripheral tissues. Our findings align with (Lopez-Vicchi et al., 2022) Starting at three months of age, when there are no genotype-specific changes in body weight, we challenged mice with either a High Fat (HFD) or a Control Diet (CD) for eight weeks. Following the treatment, thermogenic and lipogenic indicators were examined, brown and white adipose tissues were weighed, and hyperprolactinemic mice exhibited increased food intake. And agreement with (McBride et al., 2023). Women's experiences with using domperidone as a galactagogue to boost breast milk production varied, and almost half of them reported experiencing negative effects, most notably weight gain (25%). Also, with (Wang et al., 2026). Hyperprolactinemia is more likely to impact weight homeostasis through the cooperative control of several systems. These systems include peripheral metabolic mechanisms that control adipose tissue function, insulin sensitivity, and gonadal axis activity, as well as central brain circuits that control hunger, satiety signals, and energy homeostasis. Moreover, disruption of dopaminergic neurotransmitters and changes in the diurnal pattern of prolactin production may exacerbate obesity-related characteristics in hyperprolactinemia.

4.2 Effect of prolactin stimulators and on reproductive hormones

The findings of the present study are agreement with another study (Nasello et al., 1997). Both male and female rats showed a substantial rise in serum PRL levels following acute DOMP administration. female rats treated with DOMP for five and thirty days had plasma estradiol levels that were below the assay's sensitivity. The present study demonstrated a significant increase in serum progesterone concentrations following induced ovulation and domperidone administration. This finding can be explained by the formation of a functional corpus luteum after induced ovulation, which is the primary source of progesterone in queens. In addition, domperidone-induced hyperprolactinemia may have exerted a luteotropic effect, supporting corpus luteum function and contributing to the maintenance of progesterone secretion. This interpretation is consistent with recent reviews, which describe prolactin as an important luteum activity and progesterone production in the domestic cat. This result agreement with (Schäfer-Somi, 2025). Although the present study was conducted in non-pregnant queens, the formation of a functional corpus luteum

could be used to treat neurodegenerative illnesses. And agreement with (Alhaqmuhamad *et al.*, 2019) Domperidone treated rabbits maintained lower MDA levels compared with other experimental groups, as no significant increase was observed during the study period.

Conflict of Interest

Authors declare have no conflict of interest to disclose

Fundings

Author received no fund during preparation of this article.

Data Availability

All data supporting the finding will be available from corresponding author upon request.

6. Conclusions

We concluded that successful efficacy uses a domperidone as temporary contraceptive agent in Persian female cats by inducing hyperprolactinemia and suppression reproductive hormones and ovarian activity.

Reference

- Ahmad, H. S. (2025). The impacts of domperidone and nanoparticles on hormones and tissues of rabbit female reproductive system. *Tikrit Journal for Agricultural Sciences*, 25(1), 122–131.
- AL-Dulimy, W. A. G. (2016). Selenium levels in clinically healthy Iraqi stray cats in Baghdad city: Wasan A. Gharbi AL-Dulimy and Ahmed N. Awad AL-Ani. *The Iraqi Journal of Veterinary Medicine*, 40(1), 16–19.
- Alhaqmuhamad, A. A., Abdulrahman, M. A., & Ahmad, H. S. (2019). Effect of nanoparticles on liver functions and antioxidant in female rabbits treated with Domperidone. *Indian Journal of Forensic Medicine & Toxicology*, 13(4).
- Anaforoglu, I., Ertorer, M. E., Kozanoglu, I., Unal, B., Haydardedeoglu, F. E., Bakiner, O., Bozkirli, E., Tutuncu, N. B., & Demirag, N. G. (2010). Macroprolactinemia, like hyperprolactinemia, may promote platelet activation. *Endocrine*, 37(2), 294–300.
- Chien, H.-Y., Chen, S.-M., & Li, W.-C. (2023). Dopamine receptor agonists mechanism of actions on glucose lowering and their connections with prolactin actions. *Frontiers in Clinical Diabetes and Healthcare*, 4, 935872.
- de Araújo Silva, E. F., da Silva Gomes, J. A., de Oliveira, M. L. F., de Carvalho, A. G. A. F., Magalhães, C. P., da Silva, J. V., da Silva, L. H., Tenorio, B. M., Valença, M. M., &

which accelerates HDL breakdown. Therefore, the observed decrease in HDL may be attributed to reduced estrogen levels. This relationship has been demonstrated in studies such as (Oliva *et al.*, 2022) Both endogenous and exogenous sex hormones affect the levels of plasma high density lipoprotein (HDL) and its subtraction HDL2. Hepatic lipase, a lipolytic enzyme found in the endothelial cells that cover the liver sinusoids, is responsible for the degradation of HDL2.

These findings are in agreement with (Farmer & Palin, 2023) domperidone, a dopamine D2 receptor antagonist, has been widely used experimentally to induce hyperprolactinemia by block the inhibitory effect of dopamine on prolactin secretion. Also, with (Feingold, 2026) Hyperprolactinemia has been shown to affect lipid metabolism, leading to dyslipidemia characterized by increased total cholesterol and LDL level, and decreased HDL levels in some cases. Furthermore, clinical studies have demonstrated that patients with prolactinoma exhibit significant lipid abnormalities, including reduced HDL concentration (Anaforoglu *et al.*, 2010)

4.4 Effect of prolactin stimulators on prolactin hormone and MDA

The group receiving domperidone showed a considerable increase in prolactin levels, according to the current study. Domperidone's pharmacological effect as a dopamine (D2) receptor antagonist helps to explain this finding. By preventing the anterior pituitary gland from secreting prolactin, dopamine functions as a prolactin-inhibiting factor under normal physiological conditions. Therefore, Domperidone's blockage of dopamine receptors eliminates this inhibitory effect, increasing the release of prolactin (hyperprolactinemia). These findings are in agreement with (Chien *et al.*, 2023) Domperidone, an oral dopamine receptor antagonist, can raise prolactin levels in sows during the first or third week of lactation. And according to (McBride *et al.*, 2023) that female reported varying experiences with using domperidone as a galactagogue to increase breast milk supply. Malondialdehyde (MDA) is considered one of the most important biomarkers of lipid peroxidation and oxidative stress in the present study, MDA levels showed a significant decrease in the domperidone treated group compared with the control group, indicating a possible reduction in oxidative stress. This reduction may be attributed to the elevated prolactin level induced by domperidone administration, as prolactin has been reported to possess antioxidant properties through reducing reactive oxygen species (ROS) and lipid peroxidation. These finding are consistent with (Macías *et al.*, 2024). This study highlights prolactin's therapeutic potential in reducing oxidative stress and raises the possibility that it

- Macías, F., Ulloa, M., Clapp, C., Martínez de la Escalera, G., & Arnold, E. (2024). Prolactin protects hippocampal neurons against H₂O₂-induced neurotoxicity by suppressing BAX and NOX4 via the NF- κ B signaling pathway. *Plos One*, 19(11), e0313328.
- Maze, M., Daunt, D. A., & Salonen, M. (1997). Clinical applications. *Anesthesia and Analgesia in Laboratory Animals*, 397.
- McBride, G. M., Stevenson, R., Zizzo, G., Rumbold, A. R., Amir, L. H., Keir, A., & Grzeskowiak, L. E. (2023). Women's experiences with using domperidone as a galactagogue to increase breast milk supply: an Australian cross-sectional survey. *International Breastfeeding Journal*, 18(1), 11.
- Nasello, A. G., Vanzeler, M. L. A., Madureira, E. H., & Felicio, L. F. (1997). Effects of acute and long-term domperidone treatment on prolactin and gonadal hormone levels and sexual behavior of male and female rats. *Pharmacology Biochemistry and Behavior*, 58(4), 1089–1094.
- Oliva, L., Alemany, M., Fernández-López, J.-A., & Remesar, X. (2022). Circulating oestradiol determines liver lipid deposition in rats fed standard diets partially unbalanced with higher lipid or protein proportions. *British Journal of Nutrition*, 128(8), 1499–1508.
- Okur, D. T. (2025). The Use of Melatonin Implants as a Method for Estrus Suppression in Cats. *Harran University Journal of the Faculty of Veterinary Medicine*, 14(1), 104–108.
- Puoti, M. G., Assa, A., Benninga, M., Broekaert, I. J., Carpi, F. J. M., Deganello Saccomani, M., Dolinsek, J., Homan, M., Mas, E., & Miele, E. (2023). Drugs in focus: domperidone. *Journal of Pediatric Gastroenterology and Nutrition*, 77(2), e13–e22.
- e Silva, L. O., Folchini, N. P., Alves, R. L. O. R., Madureira, G., Consentini, C. E. C., Motta, J. C. L., Wiltbank, M. C., & Sartori, R. (2023). Effect of progesterone from corpus luteum, intravaginal implant, or both on luteinizing hormone release, ovulatory response, and subsequent luteal development after gonadotropin-releasing hormone treatment in cows. *Journal of Dairy Science*, 106(6), 4413–4428.
- Farmer, C., & Palin, M. (2023). Oral administration of domperidone in the first or third week of lactation: Effects on prolactin concentrations and mammary gene expression in sows and piglet growth. *Domestic Animal Endocrinology*, 83, 106789.
- Tenorio, F. das C. A. M. (2023). Protective effect of exogenous melatonin on testicular histopathology and histomorphometry of adult rats with domperidone-induced hyperprolactinemia. *Reproductive Biology*, 23(3), 100791.
- Deb, S., Biswas, P., Singh, S. K., Waikhom, G., Debbarma, R., Kashyap, S., Lal, J., Samal, K., Malla, S., & Yadav, N. K. (2025). Oral Administration of GnRH and Domperidone via Gel Feed and Their Effect on Reproductive Performance of Devario devario (Bengal Danio), an Ornamental Fish. *Gels*, 11(7), 554.
- Draper, H. H., & Hadley, M. (1990). [43] Malondialdehyde determination as index of lipid Peroxidation. In *Methods in enzymology* (Vol. 186, pp. 421–431). Elsevier.
- Farmer, C., & Palin, M. (2023). Oral administration of domperidone in the first or third week of lactation: Effects on prolactin concentrations and mammary gene expression in sows and piglet growth. *Domestic Animal Endocrinology*, 83, 106789.
- Feingold, K. R. (2026). The effect of endocrine disorders on lipids and lipoproteins. *Endotext [Internet]*.
- Haffner, S. M., Mykkänen, L., Valdez, R. A., & Katz, M. S. (1993). Relationship of sex hormones to lipids and lipoproteins in nondiabetic men. *The Journal of Clinical Endocrinology & Metabolism*, 77(6), 1610–1615.
- Jensen, R. L., Johnson, A. K., Wilborn, R. R., & Fraser, N. S. (2016). A case report on the use of domperidone for management of agalactia in a queen. *Clinical Theriogenology*, 8(2), 121–126.
- Jassim, D. H. (2010). Supervisors Confirmation. *MSc Thesis*, College of Veterinary Medicine, University of Al-Qadisiya. Pp.: 20-43.
- Karneva, K., Georgiev, I., Mihaylova, J., Stefanova-Georgieva, M., & Georgiev, G. I. (2017). 1. Student III course FVM, University of Forestry-Sofia; 2. Student V course FVM, University of Forestry-Sofia; 3. Veterinary clinic "Julyvet"–Sofia; 4. Department "Anatomy, histology and physiology", FVM, University of Forestry–Sofia.
- Lopez-Vicchi, F., De Winne, C., Ornstein, A. M., Sorianello, E., Toneatto, J., & Becu-Villalobos, D. (2022). Severe hyperprolactinemia promotes brown adipose tissue whitening and aggravates high fat diet induced metabolic imbalance. *Frontiers in Endocrinology*, 13, 883092.

- Oliva, L., Alemany, M., Fernández-López, J.-A., & Remesar, X. (2022). Circulating oestradiol determines liver lipid deposition in rats fed standard diets partially unbalanced with higher lipid or protein proportions. *British Journal of Nutrition*, 128(8), 1499–1508.
- Santos, L. C., & Silva, J. F. (2023). Molecular factors involved in the reproductive morphophysiology of female domestic cat (*Felis catus*). *Animals*, 13(19), 3153.
- Schäfer-Somi, S. (2025). Establishment and Maintenance of Feline Pregnancy—A Comprehensive Review. *Animals*, 15(9), 1249.
- Seppälä, M., Ranta, T., & Hirvonen, E. (1976). Hyperprolactinaemia and luteal insufficiency. *The Lancet*, 307(7953), 229–230.
- Si, S., Zhao, G., Song, G., & Liu, J. (2024). Efficacy and safety of domperidone and metoclopramide on human milk production in postpartum mothers: a bayesian network meta-analysis of randomized controlled trials. *BMC Pregnancy and Childbirth*, 24(1), 819.
- Sim, S. J., Jang, J.-H., Choi, J.-S., & Chun, K.-S. (2024). Domperidone, a dopamine receptor D2 antagonist, induces apoptosis by inhibiting the ERK/STAT3-mediated pathway in human colon cancer HCT116 cells. *Biomolecules & Therapeutics*, 32(5), 568.
- Szukiewicz, D. (2024a). Current insights in prolactin signaling and ovulatory function. *International Journal of Molecular Sciences*, 25(4), 1976.
- Szukiewicz, D. (2024b). Current insights in prolactin signaling and ovulatory function. *International Journal of Molecular Sciences*, 25(4), 1976.
- Thrall, M. A., Weiser, G., Allison, R. W., & Campbell, T. W. (2022). *Veterinary hematology, clinical chemistry, and cytology*. John Wiley & Sons.
- Wang, Y., Luo, D., Fang, G., Ge, M., Huang, Y., & Deng, H. (2026). From the perspective of prolactin: a view on obesity. *Frontiers in Endocrinology*, 17, 1762596.
- Yue, S., Chen, J., Duan, C., Li, X., Yang, R., Chen, M., Li, Y., Song, Z., Zhang, Y., & Liu, Y. (2024). The effect of prolactin on gene expression and the secretion of reproductive hormones in ewes during the estrus cycle. *Animals*, 14(13), 1873.