



Katedra Fizjologii i Rozrodu Zwierząt

**prof. dr hab. Marek Koziowski - Kierownik Katedry / Marek Koziowski, PhD, DSc, ProfTit, Head of Department**

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konsultacje/Consultation hours: ¶roda/Wednesday 10:00 - 12:00, pok./room 343, B1, A0

Badania/Research interests: Endokrynologia rozrodu i jej sezonowe regulacje, biologia rozrodu, biotechnologia rozrodu zwierz±t/ Reproductive endocrinology and its seasonal regulation, biology of reproduction, biotechnology of reproduction

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pok. / room 343, B1, A0

konsultacje/Consultation hours: czwartek/ Thursday 11:00 - 13:00, pok./room 343, B1, A0

Badania/Research interests: Fizjologia, rozród zwierz±t, farmakologia, patologia i u¿ytkowanie zwierz±t laboratoryjnych, udzia<sup>3</sup> zwierz±t w terapii i edukacji

**dr in¿. Anna G3rka / Anna G3rka BEng, PhD**



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konsultacje/Consultation hours:

Badania/Research interests: Analiza związków o znaczeniu biologicznym z wykorzystaniem technik chromatograficznych i spektroskopowych/Analysis of biological substances with the use of chromatographic and spectroscopic techniques

**dr n. wet. Anna Tabêcka-Łonczyńska / Anna Tabêcka-Łonczyńska, PhD  
Vet**

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konsultacje/Consultation hours: ¶roda/ Wednesday 10:00 - 12:00, W2

Badania/Research interests: Autofagia w uk³adzie rozrodczym zwierz±t / Autophagy in the reproductive system of animals

**dr Maria Romerowicz-Misielak / Maria Romerowicz-Misielak, PhD**

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**dr inż. Jennifer Mytych / Jennifer Mytych, BEng, PhD**

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pok./room W2

konsultacje/Consultation hours: piątek/Friday 9:00 - 11:00, pok./room W2

Badania/Research interests: Immunosenescencja, właściwości i biologiczne funkcje białka klotho / Immunosenescence, properties and biological functions of klotho protein

**mgr Przemysław Sołek / Przemysław Sołek, MSc**

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konsultacje/Consultation hours: wtorek / Tuesday 12:00 - 14:00, pok./room W2

Badania/Research interests: Neurobiologia molekularna i farmakotoksykologia / Molecular neurobiology and pharmacotoxicology

**dr hab. Bartosz Piechowicz, prof. UR / Bartosz Piechowicz, PhD, DSc.**



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konsultacje/Consultation hours: wtorek/Tuesday 12:00 - 13:00, pok./room W2

**dr Katarzyna Kozió<sup>3</sup> - pracownik naukowo-techniczny / Katarzyna Kozió<sup>3</sup>, PhD - Research, Technical and Administrative Staff**

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Badania/Research interests: Endokrynologia rozrodu zwierząt/  
Endocrinology of animal reproduction

**mgr Sławomir Nowak - pracownik naukowo-techniczny / Sławomir Nowak, MSc - Research, Technical and Administrative Staff**

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Badania/Research interests: Endokrynologia rozrodu i biotechnologia/  
Endocrinology of reproduction and biotechnology



The Department of Animal Physiology and Reproduction headed by prof. dr hab. Marek Koziorowski. His group is focused on issues of seasonal-dependent reproduction and neuroendocrinology, regulation of the central nerve mammalian system as well as wild animal biology.

*Adres / Address*

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Publikacje:

1. Koziorowska A, Romerowicz-Misielak M, Filipek A, **Koziorowski M**,

- Electromagnetic fields with frequencies of 5, 60 and 120 Hz affect the cell cycle and viability of human fibroblast BJ in vitro, *J Biol Regul Homeost Agents*, 2017, 31(3):725-730.
2. **TabECKa-Lonczynska A, Mytych J, Solek P, Kulpa M, KoziORowski M**, New insight on the role of melatonin receptors in reproductive processes of seasonal breeders on the example of mature male European bison (*Bison bonasus*, Linnaeus 1758), *J Photochem Photobiol B*, 2017, 173:84-91.
  3. **Mytych J, Romerowicz-Misielak M, KoziORowski M**, Klotho protects human monocytes from LPS-induced immune impairment associated with immunosenescent-like phenotype, *Mol Cell Endocrinol*, 2017, pii: S0303-7207(17)30251-4.
  4. **Mytych J, Romerowicz-Misielak M, KoziORowski M**, Long-term culture with lipopolysaccharide induces dose-dependent cytostatic and cytotoxic effects in THP-1 monocytes, *Toxicol In Vitro*, 2017, 42:1-9.
  5. **Solek P, Majchrowicz L, Bloniarz D, Krotoszynska E, KoziORowski M**, Pulsed or continuous electromagnetic field induce p53/p21-mediated apoptotic signaling pathway in mouse spermatogenic cells in vitro and thus may affect male fertility, *Toxicology*, 2017, 382:84-92.
  6. **Mytych J, Wos I, Solek P, KoziORowski M**, Protective role of klotho protein on epithelial cells upon co-culture with activated or senescent monocytes, *Exp Cell Res*, 2017, 350(2):358-367.
  7. **Satora L, KoziO<sup>3</sup> K**, Ćebrowski J, Squamous epithelium formation in the respiratory intestine of the bronze Corydoras *Corydoras aeneus* (Callichthyidae Teleostei), *Acta Histochemica* 2017, 119: 563-568.
  8. Oren DA, **Duda M, KoziO<sup>3</sup> K, Romerowicz-Misielak M, KoziORowska A, So<sup>3</sup>ek P, Nowak S, Kulpa M, KoziORowski M**, Retinal venous blood carbon monoxide response to bright light in male pigs: A preliminary study. *J Photochem Photobiol B*. 2017

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9. **Koziorowska A, Solek P, Majchrowicz L, Romerowicz-Misielak M**, The impact of electromagnetic fields with frequency of 50 Hz on metabolic activity of cells in vitro, *Przeł±d Elektrotechniczny*, 1/2017, pp. 161-164
10. **Solek P, Maziarz A, Koziorowski M**, Potencja<sup>3</sup> bioterapeutyczny technologii RNAi, 2016, *Kosmos*, 65(1), s. 17-22.
11. **Tabêcka-łonczyńska A, Kulpa M, Grzesiak M, Koziorowski M**, Retrograde and destination transfer of sex steroid hormones in the spermatic cord vessels of the mature boar (*Sus scrofa*) in short-daylight and long-daylight periods, as well as vernal and autumnal equinox, *Animal Reproduction Science*, 2016, Vol. 164, s. 1-8.
12. **Schwarzbacherová V, Wnuk M, Lewinska A, Potocki L, ĩebrowski J, Koziorowski M, Holeèková B, Ćiviková K, Dianovský J**, Evaluation of cytotoxic and genotoxic activity of fungicide formulation Tango  
Sep 22. pii: S0269-7491(16)31360-4.
13. **Romerowicz-Misielak M, Tabecka-łonczyńska A, Kozio<sup>3</sup> K**, Gilun P, Stefanczyk-Krzybowska S, Och W, **Koziorowski M**, Changes in gonadotropin-releasing hormone and gonadotropin-releasing hormone receptor gene expression after an increase in carbon monoxide concentration in the cavernous sinus of male wild boar and pig crossbreed, *Journal of Physiology and Pharmacology*, 2016 Jun;67(3):431-42.
14. **Koziorowska A, Stats K, Romerowicz-Misielak M**, The influence of environment al factors on metabolic activity of cancer cells, *Edukacja - Technika - Informatyka, Rocznik Naukowy Nr 2(16)2016* pp. 306-315, Rzeszów.
15. **Romerowicz-Misielak M, Oren DA, Sowa-Kuæma M, Tabêcka-łonczyńska A, Gilun P**,

- Stefańczyk-Krzymowska S, **Koziorowski M**, Changes in melatonin synthesis parameters after carbon monoxide concentration increase in the cavernous sinus, *Journal of Physiology and Pharmacology*, 2015, vol. 66, iss. 4, s. 505.
16. **Kozioł K**, **Koziorowski M**, Morphological defects of epididymal spermatozoa in male roe deer (*Capreolus capreolus*) during the reproductive season, *Polish Journal of Veterinary Sciences*, 2015, Vol. 18, iss. 3, s. 565-572.
  17. **Romerowicz-Misielak M**, **Kusak O**, **Koziorowska A**, **Przekop F**, **Koziorowski M**, The influence of carbon monoxide on the secretion of melatonin by pinealocytes measured in vitro, *Journal of Biological Regulators & Homeostatic Agents*, 2015, Vol. 29, iss. 2, s. 289-295.
  18. Lewińska A, Ćebrowski J, Duda M, **Górka A**, Wnuk M, Fatty acid profile and biological activities of linseed and rapeseed oils, *Molecules*, 2015, Vol. 20, iss. 12, s. 22872-22880.
  19. Kuciel M, Ćuwaśa K, Lauriano ER, **Satora L**, Zaccone G, Raton B, The structural organization in the olfactory system of the teleosts and garfishes, *Phylogeny, anatomy and physiology of ancient fishes*, London, New York : CRC Press, 2015.
  20. Krzymowski T, Stefańczyk-Krzymowska J, Muszak S, Gilun P, **Koziorowski M**, Cavernous sinus and its mysterious physiological functions : facts and hypotheses, *Acta Biologica Cracoviensia s. Zoologia*, 2013/2015, no. 55-56, s. 7-15.
  21. **Tabêcka-Łonczyńska A**, **Gilun P**, **Stefańczyk-Krzymowska S**, **Koziorowski M**, Local transfer of testosterone and aromatase activity in the spermatic cord in wild boar/pig hybrids in short-daylight and long-daylight periods, *Reproductive Biology*, 2014, Vol. 14, iss. 4, s. 282-288.
  22. Dziekońska A, Fraser L, **Koziorowska-Gilun M**, Strzeżek



- J, **Koziorowski M**, Kordan W, Seasonal-dependent variations in metabolic status of spermatozoa and antioxidant enzyme activity in the reproductive tract fluids of wild boar/domestic pig hybrids, *Polish Journal of Veterinary Sciences*, 2014, Vol. 17, no. 2, s. 307-313.
23. Knapczyk-Stwora K, Grzesiak M, Duda M, **Koziorowski M**, Galas J, S<sup>3</sup>omczyńska M, TGF members and their receptors in the fetal porcine ovaries : effect of prenatal flutamide treatment, *Folia Histochemica et Cytobiologica*, 2014, Vol. 52, no. 4, s. 317-325.
24. **Koziorowska A**, **Romerowicz-Misielak M**, Problemowa metoda nauczania jako forma zajęć na kierunku biotechnologia, *Edukacja - Technika - Informatyka*, 2014, nr 5, cz. 1, s. 476-480.
25. Kus-Lińkiewicz M, **Górka A**, Gonchar M, Simple assay of trehalose in industrial yeast, *Food Chemistry*, 2014, Vol. 158, iss. 1, s. 335-339.
26. Gawlikowski T, Romek M, **Satora L**, Edible mushroom-related poisoning : a study on circumstances of mushroom collection, transport, and storage, *Human & Experimental Toxicology*, 2015, Vol. 34, iss. 7, s. 718-724.
27. Knapczyk-Stwora K, Durlej-Grzesiak M, Ciereszko RE, **Koziorowski M**, S<sup>3</sup>omczyńska M, Antiandrogen flutamide affects folliculogenesis during fetal development in pig, *Reproduction*, 2013, Vol. 145, iss. 3, s. 265-276.
28. Koziorowska-Gilun M, Gilun P, Fraser L, **Koziorowski M**, W Kordan, Stefańczyk-Krzymowska S, Antioxidant enzyme activity and mRNA expression in reproductive tract of adult male European Bison (*Bison bonasus*, Linnaeus 1758), *Reproduction in Domestic Animals*, 2013, Feb;48(1):7-14.
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- signal to the hypothalamus, *Journal of Physiology and Pharmacology*, 2013, Vol. 64, iss. 6, s. 761-772.
30. Knapczyk-Stwora K, Grzesiak M, Duda M, **Koziorowski M**, S<sup>3</sup>omczyńska M, Effect of flutamide on folliculogenesis in the fetal porcine ovary : Regulation by Kit ligand/c-Kit and IGF1/IGF1R systems, *Animal Reproduction Science*, 2013, Vol. 142, iss. 3-4, s. 160-167
  31. **Romerowicz-Misielak M**, **Koziorowski M**, Expression analysis of gonadotropin anterior pituitary genes after increase in the carbon monoxide concentration in the cavernous sinus of the perihypophyseal vascular complex, *Reproductive Biology*, 2013, vol. 13, suppl. 1, p. 18.
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  34. Oren DA, **Koziorowski M**, Desan PH, SAD and the not-so-single photoreceptors, *American Journal of Psychiatry*, 2013, vol. 170, no. 12, p. 1403-1412.
  35. **Kozio<sup>3</sup> K**, **Koziorowski M**, Steroid hormones in peripheral blood plasma and androgen receptors in testis and epididymis of roe deer male (*Capreolus capreolus*) during the reproduction season, *Small Ruminant Research*, 2013, vol. 115, iss. 1-3, p. 86-93.
  36. M<sup>3</sup>yniec K, Budziszewska B, Reczyński W, **Sowa-Kuæema M**, Nowak G, The role of the GPR39 receptor in zinc deficient-animal model of depression, *Behav Brain Res*, 2012 Oct 19. pii: S0166 4328(12)00670-5.
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Cadmium-induced changes in genomic DNA-methylation status increase aneuploidy events in a pig Robertsonian translocation model, *Mutat Res*, 2012 May 26.

38. **Koziorowski M**, Stefańczyk-Krzymowska S, **Tabecka-Lonczyńska A**, Gilun P, Kamiński M, The gaseous messenger carbon monoxide is released from the eye into the ophthalmic venous blood depending on the intensity of sunlight, *J Biol Regul Homeost Agents*, 2012 Jan-Mar;26(1):111-8.
39. **Romerowicz-Misielak M**, **Koziorowski M**, The Gonadotropins Subunits GNRH and GNRH Receptor Gene Expression and Role of Carbon Monoxide in Seasonal Breeding Animals, *Annals of Animal Science*, 2012 Vol. 12, no. 1, p. 15-23.
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43. Koziorowska-Gilun M, **Koziorowski M**, Fraser L, Strzeżek J, Antioxidant defence system of boar cauda epididymidal spermatozoa and reproductive tract fluids, *Reprod Domest Anim*, 2011 Jun;46(3):527-33.
44. Koziorowka-Gilun M, **Koziorowski M**, Strzeżek J, Fraser L, Seasonal

changes in antioxidant defence systems in seminal plasma and fluids of the boar reproductive tract, *Reprod Biol*, 2011 Mar;11(1):37-47.

45. Grzegorzewski WJ, Muszak J, **Tabecka-Lonczyńska A**, Stefańczyk-Krzymowska S, The influence of steroids on the vascular tension of isolated superficial nasal and facial veins in gilts during sexual maturation, *Pol J Vet Sci*, 2010 13(2):253-61.
46. Grzegorzewski WJ, Ch<sup>3</sup>opek J, **Tabecka-Lonczyńska A**, Stefańczyk-Krzymowska S, The influence of steroids on vascular tension of isolated superficial veins of the nose and face during the estrous cycle of gilts, *Theriogenology*, 2010 Jan 15;73(2):215-24. Epub . 13(2):253-61.
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48. Durlej M, Kopera I, Knapczyk-Stwora K, Hejmej A, Duda M, **Koziorowski M**, Slomczynska M, Bilinska B, Connexin 43 gene expression in male and female gonads of porcine offspring following in utero exposure to an anti-androgen, flutamide, *Acta Histochem*, 2011 Jan;113(1):6-12. Epub 2009 Oct 22.
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50. Knapczyk K, Duda M, Durlej M, Galas J, **Koziorowski M**, Slomczynska M, Expression of estrogen receptor alpha (ERalpha) and estrogen receptor beta (ERbeta) in the ovarian follicles and corpora lutea of pregnant swine, *Domest Anim Endocrinol*, 2008 Aug;35(2):170-9. Epub 2008 Jun 6.
51. Knapczyk K, Duda M, Szafranska B, Wolsza K,

Panasiewicz G, **Koziorowski M**, Slomczynska M, Immunolocalisation of oestrogen receptors alpha (ERalpha) and beta (ERbeta) in porcine embryos and fetuses at different stages of gestation, *Acta Vet Hung*, 2008 Jun;56(2):221-33.

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