

## **CURRICULUM VITAE**

**NAME:** Olga Pechánová, RNDr., PhD, DSc.

**NATIONALITY:** Slovak

**BIRTH DATE:** November 13, 1962

**HOME ADDRESS:** Trnavská 36, 821 03 Bratislava, Slovak Republic

**WORK ADDRESS:** Institute of Normal and Pathological Physiology, Slovak Academy of Sciences,  
Sienkiewiczova 1, 813 71 Bratislava, Slovak Republic

### **EDUCATION:**

Comenius University, Faculty of Natural Sciences, Bratislava, Slovak Republic, 9/1981 - 6/1986,  
Field of study - Biochemistry, graduate degree in 1986 - RNDr. (Rerum Naturalis Doctor).

Comenius University, Medical Faculty, Department of Chemistry, Biochemistry and Clinical  
Biochemistry, Bratislava, 9/1989 - 6/1995 PhD student, PhD thesis: *Early responses of myocardium  
and blood vessels on hemodynamic overload.*

Institute of Normal and Pathological Physiology, Slovak Academy of Sciences, Bratislava, 2006 –  
DSc., dissertation work: *The role of nitric oxide in the experimental hypertension.*

### **WORK EXPERIENCES:**

9/1986 - present: Institute of Normal and Pathological Physiology, Slovak Academy of Sciences,  
Bratislava, Slovak Republic: Leading scientific worker - biochemistry and physiology of myocardium  
and vessel wall with special view on nitric oxide

From 4/2007 – director of the Institute

2001 - 2009: Physiological Institute, Czech Academy of Sciences, Prague, Czech Republic: Senior  
scientific worker - study of nitric oxide and reactive oxygen species balance

From 10/2012 – Faculty of Natural Sciences, Comenius University, Bratislava: Senior scientific  
worker and teacher (Physiological Biochemistry)

### **STUDY STAYS:**

1995 - Study stay at Louis Pasteur University, Strasbourg, France: Investigation of vessel wall  
responses by myograph technique and effects of red wine polyphenolic compounds.

1996, 2007 - Visiting profesor at the Department of Biochemistry, Osaka City University, Japan:  
Investigation of nitric oxide and thiol protein interactions with respect to redox control.

2000 - Visiting profesor at the Department of Toxicology, University of Helsinki, Finland:  
Determination of nitric oxide and nitrosothiol levels in spontaneous hypertension.

2002 - Study stay at the Forschungsinstitut für Molekulare Pharmakologie, Berlin, Germany: Western  
blot analysis of NO-dependent protein expression.

2003 - Study stay at the Department of Biomedical Sciences and Biotechnology, University of  
Brescia, Italy: Analysis of structural changes due to nitric oxide deficiency in the tissue.

2005 – Visiting profesor at the Complutense University, Madrid, Spain: Study of hypertension within  
metabolic syndrome.

Project leader of many international and national activities, e.g.:

1995-1998 – Vascular Nitric Oxide Synthesis: Physiological and Pathophysiological Implications (Commission of the European Community activity)

2006-2009 – Move Europe (PHEA and DG SANCO project)

2010-2013 - ENWHP project (DG SANCO project)

### **MAIN SCIENTIFIC ORIENTATION:**

The study is focused on the analysis of imbalance in the production of nitric oxide (NO) and reactive oxygen species (ROS) in the different models of cardiovascular disorders, hypertension particularly, and metabolic syndrome. *In vivo* and *in vitro* experiments are carried out to analyze the molecular mechanisms of different antihypertensive compounds and new drugs and their impact on physiological and morphological alterations in the heart and vessels.

**Publication activity:** more than 100 CC publications and 1000 CC cited references

### **AWARDS:**

Award of Slovak Academy of Sciences for the best work of young scientists in 1989.

Award of Slovak Hypertensiologic Association for the best work in hypertension in 1996.

Award of „de Office International de la Vigne et du Vin“ for the best presentation, Adelaide, Australia, 2001.

Award for the best work in the session of Endothelial dysfunction, European Society for Heart Research, Tromsø, Norway, 2005.

Award for the best work, European Society of Hypertension, Madrid, Spain, 2006.

Award of the International Society of Hypertension, Fukuoka, Japan, 2006.

Award of Slovak Cardiologic Society for the presentation in the International Meeting of Cardiology, Barcelona, 2006.

Award of the Literary Foundation for scientific literature in the category: Biological and medical literature, 2007.

Award for the best publication of the Society of Higher Brain Function, Slovak Medical Society, 2007.

Award for the best publication of the Slovak Physiological Society, 2009, 2010.

Award for the best publication of the Slovak Cardiological Society, 2010.

Invitation to present results in several international meetings.

Invitation to organize joint Satellite Meeting of ISH and NO Society on Nitric Oxide and Hypertension, Prague, Czech Republic, 2002.

Invitation to organize Satellite Meeting of ISH, Berlin, Germany, 2008.

Invitation to organize the Satellite Symposium of the 20th European Society for Hypertension Scientific Meeting: "Lifestyle and Risk Factors of Cardiovascular Diseases", 2010, 2012

Invitation for guest edition: Physiological Research 2006, Journal of Hypertension 2009, 2010.

## List of selected CC publications

1. Kruzliak P, Pechanova O. New Perspectives of Nitric Oxide Donors in Cardiac Arrest and Cardiopulmonary Resuscitation Treatment. Accepted for publication in Heart Failure Reviews.
2. Kruzliak P, Kovacova G, Pechanova O. Therapeutic potential of nitric oxide donors in the prevention and treatment of angiogenesis-inhibitor-induced hypertension. *Angiogenesis*. 2013 Apr;16(2):289-95. doi: 10.1007/s10456-012-9327-4.
3. Simko F, Reiter RJ, Pechanova O, Paulis L. Experimental models of melatonin-deficient hypertension. *Front Biosci*. 2013 Jan 1;18:616-25.
4. Věčková I, Vokurková M, Rauchová H, Dobešová Z, Pecháňová O, Kuneš J, Vorlíček J, Zicha J. Chronic antioxidant therapy lowers blood pressure in adult but not in young Dahl salt hypertensive rats: the role of sympathetic nervous system. *Acta Physiol (Oxf)*. 2013 Mar 9. doi: 10.1111/apha.12092.
5. Kondrashov A, Vranková S, Dovinová I, Sevčík R, Parohová J, Barta A, **Pechanova O**, Kovacsová M. The effects of new Alibernet red wine extract on nitric oxide and reactive oxygen species production in spontaneously hypertensive rats. *Oxid Med Cell Longev*. 2012; 2012:806285.
6. Agouni A, Ducluzeau PH, Benameur T, Faure S, Sladkova M, Duluc L, Leftherioti s G, **Pechanova O**, Delibegovic M, Martinez MC, Andriantsitohaina R. Microparticles from patients with metabolic syndrome induce vascular hypo-reactivity via Fas/Fas-ligand pathway in mice. *PLoS One*. 2011;6(11):e27809
7. Hlavačková L, Vranková S, Janega P, **Pechanova O**, Babál P. The effect of indapamide on development of myocardial hypertrophy and fibrosis in L-NAME-induced hypertension in rat. *Physiol Res*. 2011 Dec 22;60(6):845-52.
8. **Pechanova O**, Simko F. The role of nuclear factor kappa B and nitric oxide interaction in heart remodelling. *J Hypertens*. 2010 Sep;28 Suppl 1:S39-44.
9. Galleano M, **Pechanova O**, Fraga CG. Hypertension, nitric oxide, oxidants, and dietary plant polyphenols. *Curr Pharm Biotechnol*. 2010 Dec;11(8):837-48.
10. Vrankova S, Parohova J, Barta A, Janega P, Simko F, **Pechanova O**. Effect of nuclear factor kappa B inhibition on L-NAME-induced hypertension and cardiovascular remodelling. *J Hypertens*. 2010 Sep;28 Suppl 1:S45-9.
11. Paulis L, **Pechanova O**, Zicha J, Liskova S, Celec P, Mullerova M, Kollar J, Behuliak M, Kunes J, Adamcova M, Simko F. Melatonin improves the restoration of endothelium-derived constricting factor signalling and inner diameter in the rat femoral artery after cessation of L-NAME treatment. *J Hypertens*. 2010 Sep;28 Suppl 1:S19-24.
12. Simko F, **Pechanova O**, Pelouch V, Krajcirovicova K, Celec P, Palfy R, Bednarova K, Vrankova S, Adamcova M, Paulis L. Continuous light and L-NAME-induced left ventricular remodelling: different protection with melatonin and captopril. *J Hypertens*. 2010 Sep;28 Suppl 1:S13-8.
13. Franova S, Joskova M, Sutovska M, Novakova E, Adamicova K, **Pechanova O**, Nosalova G. The efficiency of polyphenolic compounds on allergen induced hyperreactivity of the airways. *Biomed Pharmacother*. 2010 Oct 23.
14. Simko F, **Pechanova O**. Remodelling of the heart and vessels in experimental hypertension: advances in protection. *J Hypertens*. 2010 Sep;28 Suppl 1:S1-6.
15. Paulis L, **Pechanova O**, Zicha J, Barta A, Gardlik R, Celec P, Kunes J, Simko F. Melatonin interactions with blood pressure and vascular function during L-NAME-induced hypertension. *J Pineal Res*. 2010 Mar;48(2):102-8.
16. **Pechanova O**, Jendekova L, Vranková S. Effect of chronic apocynin treatment on nitric oxide and reactive oxygen species production in borderline and spontaneous hypertension. Effect of chronic apocynin treatment on nitric oxide and reactive oxygen species production in borderline and spontaneous hypertension. In *Pharmacological Reports*, 2009, vol. 61, no. 1, p. 116-122.

17. **Pechanová O**, KUNEŠ, Jaroslav - DOBEŠOVÁ, Zdena - VRANKOVÁ, Stanislava - ZICHA, Josef. Contribution of neuronal nitric oxide (NO) synthase to N-acetylcysteine-induced increase of NO synthase activity in the brain of normotensive and hypertensive rats. In *Journal of Physiology and Pharmacology*, 2009, vol. 60, no. 4, p. 21-25.
18. **Pechanová O**, ŠIMKO, Fedor. Chronic antioxidant therapy fails to ameliorate hypertension: potential mechanisms behind. In *Journal of Hypertension*, 2009, vol. 27, suppl. 6, p. S32-S36.
19. REZZANI, R. - TENGATTINI, S. - BONOMINI, F. - FILIPPINI, F. - **Pechanová O**, BIANCHI, R. - ANDRIANTSITOHAINA, Ramaroson. Red wine polyphenols prevent cyclosporine-induced nephrotoxicity at the level of the intrinsic apoptotic pathway. In *Physiological Research*, 2009, vol. 58, no. 4, p. 511-519.
20. ŠIMKO, Fedor - **Pechanová O**. Potential roles of melatonin and chronotherapy among the new trends in hypertension treatment. In *Journal of Pineal Research*, 2009, vol. 47, no. 2, p. 127-133. (5.056 - IF2008). (2009 - Current Contents). ISSN 0742-3098.
21. ŠIMKO, Fedor - **Pechanová O**, PELOUCH, Václav - KRAJČIROVIČOVÁ, Kristína - MÜLLEROVÁ, M. - BEDNÁROVÁ, Kristína - ADAMCOVÁ, Michaela - PAULIS, Ludovít. Effect of melatonin, captopril, spironolactone and simvastatin on blood pressure and left ventricular remodelling in spontaneously hypertensive rats. In *Journal of Hypertension*, 2009, vol. 27, suppl. 6, p. S5-S10. (5.132 - IF2008). (2009 - Current Contents). ISSN 0263-6352.
22. ŠIMKO, Fedor, **Pechanová O**. Recent trends in hypertension treatment: perspectives from animal studies. In *Journal of Hypertension*, 2009, vol. 27, suppl. 6, p. S1-S4. (5.132 - IF2008). (2009 - Current Contents). ISSN 0263-6352.
23. VRANKOVÁ, Stanislava - JENDEKOVÁ, Lýdia - PAULIS, Ludovít - SLÁDKOVÁ, Martina - ŠIMKO, Fedor - PECHÁŇOVÁ, Oľga. Comparison of the effects of indapamide and captopril on the development of spontaneous hypertension. In *Journal of Hypertension*, 2009, vol. 27, suppl. 6, p. S42-S46. (5.132 - IF2008). (2009 - Current Contents). ISSN 0263-6352.
24. ZICHA, Josef - KUNEŠ, Jaroslav - VRANKOVÁ, Stanislava - JENDEKOVÁ, Lýdia - DOBEŠOVÁ, Zdena - PINTÉROVÁ, Mária - PECHÁŇOVÁ, Oľga. Influence of pertussis toxin pretreatment on the development of L-NAME-induced hypertension. In *Physiological Research*, 2009, vol. 58, no. 5, p. 751-755. (1.653 - IF2008). ISSN 0862-8408.
25. VLKOVIČOVÁ, Jana - JAVORKOVÁ, Veronika - MÉZEŠOVÁ, Lucia - **Pechanová O**, ANDRIANTSITOHAINA, Ramaroson - VRBJAR, Norbert. Dual effect of polyphenolic compounds on cardiac Na<sup>+</sup>/K<sup>+</sup>-ATPase during development and persistence of hypertension in rats. In *Canadian Journal of Physiology and Pharmacology*, 2009, vol. 87, no. 12, p. 1046-1054. (1.763 - IF2008). ISSN 0008-4212.
26. PAULIS, Ludovít - **Pechanová O** - ZICHA, Josef - KRAJČIROVIČOVÁ, Kristína - BARTA, Andrej - PELOUCH, Václav - ADAMCOVÁ, Michaela - ŠIMKO, Fedor. Melatonin prevents fibrosis but not hypertrophy development in the left ventricle of NG-Nitro-L-Arginine-methyl ester hypertensive rats. In *Journal of Hypertension*, 2009, vol. 27, suppl. 6, p. S11-S16.
27. HLAVAČKOVÁ, Lívia - JANEGA, Pavol - ČERNÁ, Andrea - **Pechanová O** - ANDRIANTSITOHAINA, Ramaroson - BABÁL, Pavel. Red wine polyphenols affect the collagen composition in the aorta after oxidative damage induced by chronic administration of CCl<sub>4</sub>. In *Physiological Research*, 2009, vol. 58, no. 3, p. 337-344. (1.653 - IF2008). ISSN 0862-8408.
28. Paulis L, Zicha J, Kunes J, Hojna S, Behuliak M, Celec P, Kojsova S, **Pechanová O**, Simko F. Regression of L-NAME-induced hypertension: the role of nitric oxide and endothelium-derived constricting factor. *Hypertens Res*. 2008 Apr;31(4):793-803.
- 29: Paulis L, Matuskova J, Adamcova M, Pelouch V, Simko J, Krajcirovicova K, Potacova A, Hulin I, Janega P, **Pechanová O**, Simko F. Regression of left ventricular hypertrophy and aortic remodelling in NO-deficient hypertensive rats: effect of l-arginine and spironolactone. *Acta Physiol (Oxf)*. 2008 May 13. [Epub ahead of print]

- 30: Vlkovičová J, Javorková V, Mézešová L, **Pecháňová O**, Vrbjar N. Regulatory role of nitric oxide on the cardiac Na,K-ATPase in hypertension. *Physiol Res*. 2008 Mar 28. [Epub ahead of print]
- 31: Spániková A, Simončíková P, Ravingerová T, **Pechánová O**, Barancík M. The effect of chronic nitric oxide synthases inhibition on regulatory proteins in rat hearts. *Mol Cell Biochem*. 2008 May;312(1-2):113-20.
- 32: Janega P, Kojsová S, Jendeková L, Babál P, **Pechánová O**. Indapamide-induced prevention of myocardial fibrosis in spontaneous hypertension rats is not nitric oxide-related. *Physiol Res*. 2007;56(6):825-8.
- 33: **Pechánová O**, Simko F. The role of nitric oxide in the maintenance of vasoactive balance. *Physiol Res*. 2007;56 Suppl 2:S7-S16. Review.
- 34: Simko F, Matúšková J, Lupták I, Pincíková T, Krajčírovicová K, Stvrtina S, Pomsár J, Pelouch V, Paulis L, **Pechánová O**. Spironolactone differently influences remodeling of the left ventricle and aorta in L-NAME-induced hypertension. *Physiol Res*. 2007;56 Suppl 2:S25-32.
- 35: Török J, L'upták I, Matúšková J, **Pechánová O**, Zicha J, Kunes J, Simko F. Comparison of the effect of simvastatin, spironolactone and L-arginine on endothelial function of aorta in hereditary hypertriglyceridemic rats. *Physiol Res*. 2007;56 Suppl 2:S33-40.
- 36: **Pechánová O**. Contribution of captopril thiol group to the prevention of spontaneous hypertension. *Physiol Res*. 2007;56 Suppl 2:S41-8.
- 37: Simko F, Potáčová A, Pelouch V, Paulis L, Matúšková J, Krajčírovicová K, **Pechánová O**, Adamcová M. Spontaneous, L-arginine-induced and spironolactone-induced regression of protein remodeling of the left ventricle in L-NAME-induced hypertension. *Physiol Res*. 2007;56 Suppl 2:S55-62.
- 38: Vazan R, Janega P, Hojná S, Zicha J, Simko F, **Pechánová O**, Styk J, Paulis L. The effect of continuous light exposure of rats on cardiac response to ischemia-reperfusion and NO-synthase activity. *Physiol Res*. 2007;56 Suppl 2:S63-9.
- 39: Paulis L, Vazan R, Simko F, **Pechánová O**, Styk J, Babál P, Janega P. Morphological alterations and NO-synthase expression in the heart after continuous light exposure of rats. *Physiol Res*. 2007;56 Suppl 2:S71-6.
- 40: Sládková M, Kojsová S, Jendeková L, **Pechánová O**. Chronic and acute effects of different antihypertensive drugs on femoral artery relaxation of L-NAME hypertensive rats. *Physiol Res*. 2007;56 Suppl 2:S85-91.
- 41: Javorková V, Vlkovicova J, Kunes J, **Pechanova O**, Zicha J, Vrbjar N. Effect of maturation on renal Na<sup>+</sup>/K<sup>+</sup>-atpase and its susceptibility to nitric oxide-deficient hypertension in rats. *Clin Exp Pharmacol Physiol*. 2007 Jul;34(7):617-23.
- 42: Franova S, Nosalova G, **Pechanova O**, Sutovska M. Red wine polyphenolic compounds inhibit tracheal smooth muscle contraction during allergen-induced hyperreactivity of the airways. *J Pharm Pharmacol*. 2007 May;59(5):727-32.
- 43: **Pechánová O**, Zicha J, Paulis L, Zenebe W, Dobesová Z, Kojsová S, Jendeková L, Sládková M, Dovinová I, Simko F, Kunes J. The effect of N-acetylcysteine and melatonin in adult spontaneously hypertensive rats with established hypertension. *Eur J Pharmacol*. 2007; 561(1-3):129-36.
44. **Pechanova O**, Rezzani R, Babal P, Bernatova I, Andriantsitohaina R. Beneficial effects of provinols(TM): cardiovascular system and kidney. *PHYSIOLOGICAL RESEARCH* 2006;55 Suppl 1:S17-30.
45. **Pechanova O**, Jendekova L, Kojsova S, Jagla F. Possible role of nitric oxide in the locomotor activity of hypertensive rats. *BEHAVIOURAL BRAIN RESEARCH* 2006; 174(1):160-6.
46. **Pechanova O**, Matuskova J, Capikova D, Jendekova L, Paulis L, Simko F. Effect of spironolactone and captopril on nitric oxide and S-nitrosothiol formation in kidney of L-NAME-treated rats. *KIDNEY INTERNATIONAL* 2006;70(1):170-6.

47. **Pechanova O**, Zicha J, Kojsova S, Dobesova Z, Jendekova L, Kunes J. Effect of chronic N-acetylcysteine treatment on the development of spontaneous hypertension. *CLINICAL SCIENCE (Lond)*. 2006;110(2):235-42.
48. Zicha J, **Pechanova O**, Cacanyiova S, Cebova M, Kristek F, Torok J, Simko F, Dobesova Z, Kunes J. Hereditary hypertriglyceridemic rat: a suitable model of cardiovascular disease and metabolic syndrome? *PHYSIOLOGICAL RESEARCH* 2006;55 Suppl 1:S49-63.
- 49: Jendekova L, Kojsova S, Andriantsitohaina R, **Pechanova O**. The time-dependent effect of provinol<sup>TM</sup> on brain NO synthase activity in L-NAME-induced hypertension. *PHYSIOLOGICAL RESEARCH* 2006;55 Suppl 1:S31-7.
- 50: Kojsova S, Jendekova L, Zicha J, Kunes J, Andriantsitohaina R, **Pechanova O**. The effect of different antioxidants on nitric oxide production in hypertensive rats. *PHYSIOLOGICAL RESEARCH* 2006 Dec 20;55(Supplement 1):S3-S16.
51. Rezzani R, Rodella LF, Tengattini S, Bonomini F, **Pechanova O**, Kojsova S, Andriantsitohaina R, Bianchi R. Protective role of polyphenols in cyclosporine a-induced nephrotoxicity during rat pregnancy. *JOURNAL OF HISTOCHEMISTRY AND CYTOCHEMISTRY* 2006;54(8):923-32.
52. Takac P, Nunn MA, Meszaros J, **Pechanova O**, Vrbjar N, Vlasakova P, Kozanek M, Kazimirova M, Hart G, Nuttall PA, Labuda M. Vasotab, a vasoactive peptide from horse fly *Hybomitra bimaculata* (Diptera, Tabanidae) salivary glands. *JOURNAL OF EXPERIMENTAL BIOLOGY* 2006;209(Pt 2):343-52.
53. Babal P, Kristova V, Cerna A, Janega P, **Pechanova O**, Danihel L, Andriantsitohaina R. Red wine polyphenols prevent endothelial damage induced by CCl<sub>4</sub> administration. *PHYSIOLOGICAL RESEARCH* 2006;55(3):245-51.
54. Rauchova H, **Pechanova O**, Kunes J, Vokurkova M, Dobesova Z, Zicha J. Chronic N-acetylcysteine administration prevents development of hypertension in N(omega)-nitro-L-arginine methyl ester-treated rats: the role of reactive oxygen species. *HYPERTENSION RESEARCH* 2005;28(5):475-82.
55. Buffoli B, **Pechanova O**, Kojsova S, Andriantsitohaina R, Giugno L, Bianchi R, Rezzani R. Provinol prevents CsA-induced nephrotoxicity by reducing reactive oxygen species, iNOS, and NF-kB expression. *JOURNAL OF HISTOCHEMISTRY AND CYTOCHEMISTRY* 2005;53(12):1459-68.
56. Simko F, Luptak I, Matuskova J, Krajcirovicova K, Sumbalova Z, Kucharska J, Gvozdjakova A, Simko J, Babal P, **Pechanova O**, Bernatova I. L-arginine fails to protect against myocardial remodelling in L-NAME-induced hypertension. *EUROPEAN JOURNAL OF CLINICAL INVESTIGATION* 2005;35(6):362-8.
57. Vlkovicova, J; Javorkova, V; **Pechanova, O**; Vrbjar, N. Gender difference in functional properties of Na,K-ATPase in the heart of spontaneously hypertensive rats. *LIFE SCIENCES* 2005; 76 (9): 971-982.
58. Simko, F; Pelouch, V; Torok T; Luptak I; Matuskova J; **Pechanova, O**; Babal P. Protein remodeling of the heart ventricles in hereditary hypertriglyceridemic rat: effect of ACE inhibition. *JOURNAL OF BIOMEDICAL SCIENCE* 2004; 12: 1-9.
59. Gerova, M; Torok, J; **Pechanova, O**; Matuskova, J. Rilmenidine prevents blood pressure increase in rats with compromised nitric oxide production. *ACTA PHARMACOLOGICA SINICA* 2004; 25 (12): 1640-1646.
60. **Pechanova, O**; Bernatova, I; Babal, P; Martinez, MC; Kysela, S; Stvirtina, S; Andriantsitohaina, R. Red wine polyphenols prevent cardiovascular alterations in L-NAME-induced hypertension. *JOURNAL OF HYPERTENSION* 2004; 22 (8): 1551-1559.
61. **Pechanova, O**; Dobesova, Z; Cejka, J; Kunes, A; Zicha, J. Vasoactive systems in L-NAME hypertension: the role of inducible nitric oxide synthase. *JOURNAL OF HYPERTENSION* 2004; 22 (1): 167-173.
62. Kunes, J; Hojna, S; Kadlecova, M; Dobesova, Z; Rauchova, H; Vokurkova, M; Loukotova J; **Pechanova, O**; Zicha, J. Altered balance of vasoactive systems in experimental hypertension: The role of relative NO deficiency. *PHYSIOLOGICAL RESEARCH* 2004; 53: S23-S34 Suppl. 1.

63. Javorkova, V; **Pechanova, O**; Andriantsitohaina, R; Vrbjar, N. Effect of polyphenolic compounds on the renal Na<sup>+</sup>,K<sup>+</sup>-ATPase during development and persistence of hypertension in rats. *EXPERIMENTAL PHYSIOLOGY* 2004; 89 (1): 73-81.
64. Simko, F; Matuskova, J; Luptak, I; Krajcirovicova, K; Kucharska, J; Gvozdjakova, A; Babal, P; **Pechanova, O**. Effect of simvastatin on remodeling of the left ventricle and aorta in L-NAME-induced hypertension. *LIFE SCIENCES* 2004; 74 (10): 1211-1224.
65. Rajska, P; **Pechanova, O**; Takac, P; Kazimirova, M; Roller, L; Vidlicka, L; Ciampor, F; Labuda, M; Nuttall, PA. Vasodilatory activity in horsefly and deerfly salivary glands. *MEDICAL AND VETERINARY ENTOMOLOGY* 2003; 17 (4): 395-402.
66. Zicha, J; **Pechanova, O**; Dobesova, Z; Kunes, J. Hypertensive response to chronic N-G-nitro-L-arginine methyl ester (L-NAME) treatment is similar in immature and adult Wistar rats. *CLINICAL SCIENCE* 2003; 105 (4): 483-489.
67. Zenebe, W; **Pechanova, O**; Andriantsitohaina, R. Red wine polyphenols induce vasorelaxation by increased nitric oxide bioactivity. *PHYSIOLOGICAL RESEARCH* 2003; 52 (4): 425-432.
68. Vokurkova, M; Dobesova, Z; **Pechanova, O**; Kunes, J; Zicha, J. Erythrocyte ion transport and membrane lipid composition in young and adult rats with NO-deficient hypertension. *LIFE SCIENCES* 2003; 73 (13): 1637-1644.
69. Javorkova, V; **Pechanova, O**; Andriantsitohaina, R; Vrbjar, N. Effect of polyphenolic compounds on the renal Na<sup>+</sup>,K<sup>+</sup>-ATPase during the restoration of normotension after experimentally induced hypertension in rats. *EXPERIMENTAL PHYSIOLOGY* 2003; 88 (4): 475-482.
70. Vrbjar, N; Strniskova, M; **Pechanova, O**; Gerova, M. Short-term NO synthase inhibition and the ATP affinity of cardiac Na,K-ATPase. *PHYSIOLOGICAL RESEARCH* 2002; 51 (6): 565-569.
71. Vrbjar, N; Javorkova, V; **Pechanova, O**. Changes of sodium and ATP affinities of renal Na,K-ATPase during and after nitric oxide-deficient hypertension. *PHYSIOLOGICAL RESEARCH* 2002; 51 (5): 475-481.
72. Vrbjar, N; **Pechanova, O**. Sodium and ATP affinities of the cardiac (Na,K)-ATPase in relation to nitric oxide synthesis in spontaneously hypertensive rats. *LIFE SCIENCES* 2002; 71 (15): 1751-1761.
73. Simko, F; Luptak, I; Matuskova, J; Babal, P; **Pechanova, O**; Bernatova, I; Hulin, I. Heart remodeling in the hereditary hypertriglyceridemic rat - Effect of captopril and nitric oxide deficiency *LIPIDS AND INSULIN RESISTANCE: THE ROLE OF FATTY ACID METABOLISM AND FUEL PARTITIONING (ANNALS OF THE NEW YORK ACAD SCI)* 2002; 967: 454-46.
74. Tribulova, N; Okruhlicova, L; Novakova, S; Pancza, D; Bernatova, I; **Pechanova, O**; Weismann, P; Manoach, M; Seki, S; Mochizuki, S. Hypertension-related intermyocyte junction remodelling is associated with a higher incidence of low-K<sup>+</sup>-induced lethal arrhythmias in isolated rat heart *EXPERIMENTAL PHYSIOLOGY* 2002; 87 (2): 195-205.
75. Bernatova, I; **Pechanova, O**; Babal, P; Kysela, S; Stvrtina, S; Andriantsitohaina, R. Wine polyphenols improve cardiovascular remodeling and vascular function in NO-deficient hypertension. *AMERICAN JOURNAL OF PHYSIOLOGY-HEART AND CIRCULATORY PHYSIOLOGY* 2002; 282 (3): H942-H948.
76. Simko, F; **Pechanova, O**; Bernatova, I; Pelouch, V. Effect of angiotensin-converting enzyme inhibitors on non-diseased myocardium of experimental animals: potential clinical implications. *MEDICAL HYPOTHESES* 2000; 54 (4): 626-627.
77. Babal, P; **Pechanova, O**; Bernatova, I. Long-term administration of D-NAME induces hemodynamic and structural changes in the cardiovascular system. *PHYSIOLOGICAL RESEARCH* 2000; 49 (1): 47-54.

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