

PERSONAL INFORMATION

Petya Pavlova Markova



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Female | 07 September 1961 | Bulgarian

WORK EXPERIENCE

- 2021- until now** Associate professor- SWU Neofit Rilski, Blagievgrad
- 1990 - until now** Biologist
Department of Physiology, Medical Faculty, Medical University - Sofia
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https://medfac.mu-sofia.com/index.php?page_id=73§ion=134&lang=en
- 1986-1988** Biologist
Institute of Physiology, Bulgarian Academy of Sciences
- 1984-1986** Biologist
Biotechprom company, St. Zagora

EDUCATION AND TRAINING

- 2015** PhD of animal and human physiology
Department of Physiology, Medical university of Sofia, Sofia (Bulgaria)
- 1979 -1984** Sofia university "St. Kliment Ohridski", Sofia (Bulgaria)
Master degree in Molecular and functional biology with specialization in biophysics and radiobiology
- 1975 -1979** High school of mathematics "Nikolay Lobachevski", Yambol (Bulgaria)

PERSONAL SKILLS

Mother tongue(s) Bulgarian

Other language(s)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	B1	B1	B1	A2	B1
Russian	C1	C1	C1	C1	C1

Communication skills

- Very good communicational skills acquired as a result of work in a team in different experimental work groups

Organisational / managerial skills	<ul style="list-style-type: none"> ▪ Excellent organisational skills
Teaching Experience	<ul style="list-style-type: none"> ▪ 2015 - Teaching and Practical training in physiology of students of Medicine, Dental medicine and Pharmacy in Medical University - Sofia, Faculty of Medicine ▪ Experimental work with student groups in the Laboratory of Hemodynamics and renal functions, Department of Physiology, Medical University - Sofia
Organization of scientific events	<ul style="list-style-type: none"> ▪ Organisation of different scientific workshops, seminars and presentations
ADDITIONAL INFORMATION	
Main research topics	Interactions between nervous and humoral factors in the regulation of renal and cardiovascular function in animal models of socially significant diseases, fast mechanisms of regulation of the cardiovascular system, spectral analysis of arterial pressure and heart rate
Publication	<ul style="list-style-type: none"> ▪ PhD thesis, topic "Influence of nerves and humoral factors on quick oscillations of arterial blood pressure and heart rate variability in normotensive and hypertensive rats" ▪ 35 Papers in peer reviewed journals (SCOPUS) ▪ 109 citations without self-citations (SCOPUS) 2022 ▪ h index - 7
Projects	<p>leading researcher - 4 projects financed by Medical University-Sofia</p> <p>Member of scientific groups - 23 projects financed by Medical University-Sofia</p> <p>Member of scientific groups of 6 projects financed by National Scientific Found - Ministry of Education and Science</p>
Conferences	<p>32 international</p> <p>34 Bulgarian congresses and conferences</p>
Honours and awards	Signum Laudis pro Scientiae Meritis, 2011 г., for the best research work in a scientific field of Medicine Medico-Biological branch funded by the Medical University of Sofia, Grand 2008/2009
Memberships	<p>Bulgarian Society of Physiological Sciences</p> <p>Bulgarian Peptide Society</p>
Certificates	Award: " Signum Laudis pro Scientiae Meritis" 2011, for the best research work in scientific field of medicine medico-biological branch, funded by Medical University-Sofia, Grant 2008 and Grant 2009
Courses	Course of humane attitude towards experimental animals used for scientific and experimental purposes
ANNEXES	

List of publications (SCOPUS)
List of participation in research projects

List of Publications (Scopus)

1. Markova P, Girchev R. The effect of unilateral nephrectomy on arterial blood pressure variability in spontaneously hypertensive rats. *C R Acad Bulgare Sci [Internet]*. 2022;75(1):136-42. Available from: www.scopus.com
2. Varadinova MG, Stefanova JD, Hristova-Avakumova NG, Hadjimitova VA, Markova PP, Girchev RA. Effects of pioglitazone on the hippocampal oxidative status of rats with prenatal valproic acid-induced autistic-like symptoms. *Bulg Chem Commun [Internet]*. 2020;52:13-7. Available from: www.scopus.com
3. Markova PP, Hristova-Avakumova NG, Hadjimitova VA, Girchev RA. Urinary total antioxidant capacity after unilateral nephrectomy in spontaneously hypertensive rats. *Bulg Chem Commun [Internet]*. 2020;52:18-22. Available from: www.scopus.com
4. Ruseva S, Lozanov V, Markova P, Girchev R, Mitev V. In vivo investigation of homocysteine metabolism to polyamines by high-resolution accurate mass spectrometry and stable isotope labeling. *Anal Biochem [Internet]*. 2014;457:38-47. Available from: www.scopus.com
5. Petkova Z, Tchekalarova J, Pechlivanova D, Moyanova S, Kortenska L, Mitreva R, Popov D, Markova P, Lozanov V, Atanasova D, Lazarov N, Stoynev A. Treatment with melatonin after status epilepticus attenuates seizure activity and neuronal damage but does not prevent the disturbance in diurnal rhythms and behavioral alterations in spontaneously hypertensive rats in kainate model of temporal lobe epilepsy. *Epilepsy Behav [Internet]*. 2014;31:198-208. Available from: www.scopus.com
6. Ivanova N, Pechlivanova D, Tchekalarova J, Popov D, Markova P, Stoynev A. Beneficial effects of chronic treatment with losartan on behavioural disturbances in kainate model of temporal lobe epilepsy. *C R Acad Bulgare Sci [Internet]*. 2013;66(12):1761-8. Available from: www.scopus.com
7. Pechlivanova DM, Markova PP, Popov D, Stoynev AG. The role of the angiotensin AT2 receptor on the diurnal variations of nociception and motor coordination in rats. *Peptides [Internet]*. 2013;39(1):152-6. Available from: www.scopus.com
8. Nyagolov Y, Markova P, Vuchidolova V, Atanassova K, Girchev R. The effect of nonselective nitric oxide synthase inhibition on urine prostaglandin E2 and prostaglandin F2 α excretion in spontaneously hypertensive rats. *C R Acad Bulgare Sci [Internet]*. 2011;64(1):141-8. Available from: www.scopus.com
9. Tchekalarova J, Pechlivanova D, Atanasova T, Markova P, Lozanov V, Stoynev A. Diurnal variations in depression-like behavior of wistar and spontaneously hypertensive rats in the kainate model of temporal lobe epilepsy. *Epilepsy Behav [Internet]*. 2011;20(2):277-85. Available from: www.scopus.com
10. Pechlivanova DM, Markova PP, Stoynev AG. Effect of the AT1 receptor antagonist losartan on diurnal variation in pain threshold in spontaneously hypertensive rats. *Methods Find Exp Clin Pharmacol [Internet]*. 2010;32(9):663-8. Available from: www.scopus.com
11. Tchekalarova J, Pechlivanova D, Atanasova C, Markova P, Stoynev A. Study of diurnal rhythms of depressive state in kainate model of epilepsy in normotensive and spontaneous hypertensive rats. *C R Acad Bulgare Sci [Internet]*. 2010;63(11):1691-6. Available from: www.scopus.com
12. Tchekalarova J, Pechlivanova D, Itzev D, Lazarov N, Markova P, Stoynev A. Diurnal rhythms of spontaneous recurrent seizures and behavioral alterations of wistar and spontaneously hypertensive rats in the kainate model of epilepsy. *Epilepsy Behav [Internet]*. 2010;17(1):23-32. Available from: www.scopus.com
13. Tchekalarova J, Pechlivanova D, Markova P, Stoynev A. Behavioural alterations in wistar and spontaneously hypertensive rats in kainate model of epilepsy. *C R Acad Bulgare Sci [Internet]*. 2009;62(6):767-72. Available from: www.scopus.com
14. Girchev RA, Markova PP, Naydenova ED, Vezekov LT. Fast oscillations of arterial blood pressure during nociceptin analogues application in wistar rats. *Bulg Chem Commun [Internet]*. 2009;41(2):127-32. Available from: www.scopus.com
15. Ivanova T, Markova P, Girchev R. Plasma renin activity in spontaneously hypertensive rats. role of unilateral nephrectomy and renal nerves. *C R Acad Bulgare Sci [Internet]*. 2008;61(3):401-6. Available from: www.scopus.com
16. Markova P, Tolekova A, Ilieva G, Girchev R. Role of endogenous endothelins in the regulation of plasma renin activity by nitric oxide and renal nerves in spontaneously hypertensive rats. *Acta Med Bulg [Internet]*. 2007;34(1):51-8. Available from: www.scopus.com
17. Ivanova T, Markova P, Girchev R. Changes in the kidney excretory function and plasma renin activity after unilateral nephrectomy and nitric oxide synthase inhibition. *C R Acad Bulgare Sci [Internet]*. 2007;60(2):195-200. Available from: www.scopus.com
18. Markova P, Girchev R. Differences in the spectral characteristics of interpulse interval and blood pressure between normotensive and spontaneously hypertensive rats after nitric oxide synthase inhibition. *C R Acad Bulgare Sci [Internet]*. 2007;60(7):799-804. Available from: www.scopus.com
19. Ivanova T, Markova P, Girchev R. Nitric oxide in the regulation of blood pressure and urinary sodium and chloride excretion after unilateral nephrectomy in spontaneously hypertensive rats. *C R Acad Bulgare Sci [Internet]*. 2007;60(11):1209-14. Available from: www.scopus.com

20. Ivanova T, Markova P, Girchev R. Participation of renal nerves in the regulation of kidney excretory function changed after unilateral nephrectomy. C R Acad Bulgare Sci [Internet]. 2007;60(3):327-32. Available from: www.scopus.com
21. Girchev R, Markova P. Renal nerves participation in the effects of nitric oxide and ET A/ETB receptor inhibition in spontaneously hypertensive rats. Physiol Res [Internet]. 2007;56(1):25-35. Available from: www.scopus.com
22. Girchev R, Markova P, Vuchidolova V. Renal effects of acute nitric oxide and etA/ETB receptor inhibition in conscious spontaneously hypertensive rats. Acta Physiol Hung [Internet]. 2006;93(1):61-70. Available from: www.scopus.com
23. Girchev RA, Bäckér A, Markova PP, Kramer HJ. Interaction of endothelin with renal nerves modulates kidney function in spontaneously hypertensive rats. Kidney Blood Press Res [Internet]. 2006;29(2):126-34. Available from: www.scopus.com
24. Girchev R, Markova P, Vuchidolova V. Influence of renal denervation on renal effects of acute nitric oxide and ETA/ETB receptor inhibition in conscious normotensive rats. J Physiol Pharmacol [Internet]. 2006;57(1):17-27. Available from: www.scopus.com
25. Girchev R, Bäckér A, Markova P, Kramer HJ. Renal endothelin system and excretory function in wistar-kyoto and long-evans rats. Acta Physiol [Internet]. 2006;186(1):67-76. Available from: www.scopus.com
26. Girchev R, Markova P, Vuchidolova V. Influence of nonselective ETA/ETB receptor blockade on renal function in conscious rats: Effects of renal denervation. J Physiol Pharmacol [Internet]. 2004;55(2):381-9. Available from: www.scopus.com
27. Girchev R, Markova P. Blood pressure variability in conscious spontaneously hypertensive rats during EndothelinA receptor inhibition. Methods Find Exp Clin Pharmacol [Internet]. 2004;26(1):25-9. Available from: www.scopus.com
28. Girchev R, Bäckér A, Markova P, Kramer HJ. Impaired response of the denervated kidney to endothelin receptor blockade in normotensive and spontaneously hypertensive rats. Kidney Int [Internet]. 2004;65(3):982-9. Available from: www.scopus.com
29. Girchev R, Mikhov D, Markova P. Renal and cardiovascular effects of renal denervation in conscious rats after adenosine administration and nitric oxide synthase inhibition. Kidney Blood Press Res [Internet]. 2002;25(4):217-23. Available from: www.scopus.com
30. Girchev R, Markova P, Mikhov D, Avramova T, Natcheff N. Involvement of renal nerves and endothelins in the regulation of renal water excretion in diabetes insipidus rats. Kidney Blood Press Res [Internet]. 2001;24(1):5-9. Available from: www.scopus.com
31. Girchev R, Markova P, Mikhov D, Avramova T, Natcheff N. Renal nerves and endothelins interaction in the control of renal excretory function in conscious long-evans rats. Auton Neurosc Basic Clin [Internet]. 2000;84(1-2):107-10. Available from: www.scopus.com
32. Girchev R, Mikhov D, Markova P, Vuchidolova V. Changes of renal function and blood pressure after nitric oxide synthase inhibition in renal-denervated conscious rats. Acta Physiol Pharmacol Bulg [Internet]. 2000;25(3-4):109-14. Available from: www.scopus.com
33. Danev S, Datzov E, Svetoslavov S, Mikhov D, Markova P, Girchev R. Spectral coherence between blood pressure and inter-beat intervals in hypertension. Cent Eur J Public Health [Internet]. 1999;7(4):185-8. Available from: www.scopus.com
34. Girchev R, Markova P, Mikhov D, Natcheff N. Renal excretory function in conscious long evans and vasopressin deficient (brattleboro) rats after endothelin-A receptor inhibition. Acta Physiol Pharmacol Bulg [Internet]. 1999;23(3-4):73-7. Available from: www.scopus.com
35. Mikhov D, Markova P, Girchev R. Spectral analysis of heart rate and arterial pressure variability after nitric oxide synthase inhibition. Acta Physiol Pharmacol Bulg [Internet]. 1998;23(3-4):79-84. Available from: www.scopus.com

List of participation in projects

Financed by Medical University-Sofia:

1. Significance of interaction between endothelins and nitric oxide in the regulation of renal function blood pressure and heart rate variability in spontaneously hypertensive rats, Contract №4/2004, MU-Sofia, **leading researcher**
2. Significance of interaction between renal nerves, endothelins and nitric oxide in the regulation of renal function blood pressure and heart rate variability in spontaneously hypertensive rats, Agreement №1/2006, MU-Sofia, **leading researcher**
3. Role of neuronal nitric oxide synthase in the regulation of plasma renin activity and renal excretory function in spontaneously hypertensive rats, Contract №18/2008, MU-Sofia, **leading researcher**
4. Role of nitric oxide, produced by neuronal nitric oxide synthase in the regulation of fast oscillation in arterial blood pressure and heart rate in spontaneously hypertensive rats, Contract №21/2009, MU-Sofia, **leading researcher**
5. Endogenous factors modulated baroreceptor regulation of hemodynamics and renal function, Agreement №1/1993, MU-Sofia - **member of research team**

6. Interaction between nitric oxide and adenosine in baroreflex regulation of blood pressure, Agreement №1/1998, MU-Sofia - **member of research team**
7. Significance of nitric oxide and adenosine in modulation of fast oscillation in arterial blood pressure and heart rate in conscious rats, Contract №12/1999, MU-Sofia - **member of research team**
8. Participation of endothelin system in the regulation of renal function, blood pressure and heart rate variability in spontaneously hypertensive rats, Contract Дор. №4/2003, MU-Sofia - **member of research team**
9. Investigation of influence of galantamin hydrobromide on model of insomnia in spontaneously hypertensive rats, Contract №44/2005, MU-Sofia - **member of research team**
10. Participation of AT1 receptors in the regulation of circadian rhythm of pain threshold in spontaneously hypertensive rats, Contract №35/2006, MU-Sofia - **member of research team**
11. Investigation the role of chronic treatment by selective AT2 receptor ligand on day-night rhythm of pain threshold in rats, Contract №7/2007, MU-Sofia - **member of research team**
12. Histomorphological changes in aorta in normotensive and spontaneously hypertensive rats in lipofundin induced model of atherosclerosis, Contract №10/2007, MU-Sofia - **member of research team**
13. Investigation of diurnal dynamics of brain hyperexcitability in kainate model of temporal lobe epilepsy in normotensive and spontaneously hypertensive rats. Contract №32/2008, Medical University – Sofia, **member of the scientific team**.
14. Equipment of vivarium, in accordance with, statutory requirements for animals used in experiment, Contract №2-И/2009, MU-Sofia, **member of research team**
15. Influence and effects in homocysteine, contained in foods and drinks on homocysteine status of organism. Model investigation. Contract №3-C/2009, MU-Sofia - **member of research team**
16. Influence of nonselective inhibition of nitric oxide synthase on prostaglandin E2 and F2-ALPHA level in plasma and urine in spontaneously hypertensive rats, Contract №22/2009, МУ-София, MU-Sofia - **member of research team**
17. Investigation of diurnal dynamics of depressive states in kainate model of temporal lobe epilepsy in normotensive and spontaneously hypertensive rats. Contract № 23/2009, Medical University – Sofia, member of the scientific team.
18. Participation of renal nerves and nNOS in mediation of fast oscillation of arterial pressure and heart rate in spontaneously hypertensive rats, Contract №21/2010, MU-Sofia - **member of research team**
19. Investigation of the effects of melatonin on the circadian rhythmicity of depressive state in in kainate model of temporal lobe epilepsy in normotensive and spontaneously hypertensive rats. Contract №2/2010, Medical University – Sofia, **member of research team**
20. Influence of vitamins on homocystein metabolism - model investigation on rats, Contract №1-C/2011 MU-Sofia - **member of research team**
21. Investigation of the effect of the selective angiotensin AT1 receptor antagonist losartan on the circadian rhythmicity of depressive states in kainate model of temporal lobe epilepsy in normotensive and spontaneously hypertensive rats. Contract №30/2011, Medical University – Sofia, **member of research team**
22. Influence of the neuropeptide angiotensin II on the changes in stereognostic memory, circadian rhythm of depressive states and of water-salt metabolism in kainate model of temporal lobe epilepsy in Wistar rats. Contract №28/2012, Medical University – Sofia, **member of research team**
23. Participation of adenosine A1 receptors and nitric oxide, produced by neuronal form of nitric oxide synthase in regulation of renal blood flow in rats, Contract №21/2016, MU-Sofia - **member of research team**
24. Involvement of endothelial factors in the regulation of arterial pressure in spontaneous hypertension, contract No. D-56/23.04.2019, MU-Sofia, member of the scientific team
25. A pharmacological study of the effects of a nociceptin analogue in experimental model of neuroinflammation, Contract No. D-56/23.04.2019, Sofia University, member of the scientific team
26. Immunohistochemical study of endothelial factors after selective inhibition of endothelin receptors in spontaneously hypertensive rats, MU-Sofia D-100, 2020, member of the scientific team
27. Construction of an internal network infrastructure to ensure the storage, transfer and processing of biological signals and obtained experimental results from complex studies of animal models of socially significant diseases, MU-Sofia, D-41, 2021, member of the scientific team

Financed by National Scientific Found (NSF) - Ministry of Education and Science:

1. Significance of endothelins and renal nerves for regulation of renal function and arterial pressure variability in hypertension, Contract Л-814/1998, NSF- **member of research team**
2. Investigation of biological activity of newly synthesised nociceptin analogues of neuropeptide nociceptin/orfanin FQ(1-13)NH₂q modified in nine position, Contract BY-Л-205/2006-2009, NNF- **member of research team**
3. National university complex for biomedical investigation, Contract № ДУНК 01-2-2009, NSF - **member of research team**
4. Investigation of angiotensin II modulator system and melatonin participation in mechanisms regulating circadian rhythmicity of brain reactivity in kainite model of epilepsy, ДТК 02-56/2009, NSF - **member of research team**
5. Synthesis and biological activity of new nociceptin analogues as a potential anti pain means, ДТК 02-61/2009 NSF - **member of research team**
6. Model membrane systems in the presence of biologically active macromolecules: physical and physicochemical parameters in normality and pathology. Contract No. KP-06-H38/14, dated 06.12.2019, **member of the scientific tea**