Harbuzova Viktoriia Yuriivna	
Contacts	116, Kharkivska St., Sumy Office 415 (+380542) 65-40-63 E-mail: v.garbuzova@med.sumdu.edu.ua
Position	Head of the Department of Physiology and Pathophysiology with a Course in Medical Biology
Academic Degree	Doctor of Biological Sciences
Academic Title	Professor
Subjects Taught	Physiology, Pathophysiology, Clinical Physiology, Problem-Oriented Learning
Scopus Author ID	55190340800, h-index = 6 https://www.scopus.com/authid/detail.uri?authorId=55190340800
ORCID ID	https://orcid.org/0000-0001-7183-6997
Google Scholar	h-index – 8 https://scholar.google.com.ua/citations?user=hrsWFfUAAAAJ&hl=uk&oi=ao
ResearcherID	G-6369-2019 https://publons.com/researcher/1739871/victoriia-harbuzova/
ResearchGate	https://www.researchgate.net/profile/Viktoriia-Harbuzova
eSSUIR	https://essuir.sumdu.edu.ua/browse?type=author&value=Harbuzova,%20Viktoriia%20Yuriivna
Level of Foreign Language Proficiency	B2 – English
Candidate's Dissertation	“Experimental Data on the Role of Lipid Peroxidation in the Development of Vascular Calcification Induced by Hypervitaminosis D” (Specialty: 03.00.13 – Human and Animal Physiology; Scientific Supervisor – Prof. O.V. Ataman) (Kyiv, O.O. Bogomolets Institute of Physiology of the National Academy of Sciences of Ukraine, 2004).
Doctoral Dissertation	“The Role of the Matrix Gla Protein (MGP) System in the Pathogenesis of Sclerotic Lesions of Arteries and Their Complications (Experimental and Molecular-Genetic Studies)” (Specialty: 14.03.04 – Pathological Physiology; Scientific Consultant – Prof. O.V. Ataman) (Luhansk, Luhansk State Medical University of the Ministry of Health of Ukraine, 2013).
Responsibilities and Assignments	• Head of the Molecular-Genetic Research Laboratory at Sumy State University • Member of the editorial board of the journals "Achievements of Clinical and Experimental Medicine" (Ternopil) and "Eastern Ukrainian Medical Journal" (Sumy) • Chair of the jury for the second stage of the All-Ukrainian Competition-Defense of the National Center "Small Academy of Sciences of Ukraine" (2017, 2018, 2019)

	• Chair of the jury for the second stage of the All-Ukrainian Student Olympiad in Biology (2018, 2019, 2021, 2022) • Member of the jury for the All-Ukrainian Competition of Student Research Papers (2018, 2019) (Poltava)
Work Experience	1993–2021: Senior laboratory assistant, assistant, senior lecturer, associate professor, and professor at the Department of Physiology and Pathophysiology with a Course in Medical Biology at the Medical Institute of Sumy State University; from 2022 to the present – Head of the Department of Physiology and Pathophysiology with a Course in Medical Biology at Sumy State University. Performed the duties of Deputy Director of the Medical Institute for Educational and Methodological Work.
Awards and Honours	• Honorary Certificate from the Ministry of Education of Ukraine "For fruitful work with gifted student youth" (2001) • Honorary Certificate from the Ministry of Education of Ukraine "For fruitful work with gifted student youth" (2011) • Honorary Certificate from the Department of Education and Science of the Sumy Regional State Administration "For significant achievements in scientific and methodological work, a substantial personal contribution to the training of specialists, and for organizing and conducting scientific work among student youth on the occasion of Science Day" (2016) • Certificate from the Department of Education and Science of the Sumy Regional State Administration "For many years of conscientious work, professionalism, substantial personal contribution to the training of highly qualified specialists, fruitful long-term activity, and on the occasion of the 70th anniversary of the institution's foundation" (2018) • Diploma in the nomination "Scientific Supervisor of Students" from Sumy State University for achieved indicators in preparing winning students for All-Ukrainian competitions of student research papers and on the occasion of Science Day in Ukraine (2020).
Participation in International Projects	530519-TEMPUS-1-2012-1-UK-TEMPUS-JPC "Implementation of Innovative Learning Strategies in Medical Education and Development of an International Network of National Training Centers" (partners: St. George's University (UK), Aristotle University of Thessaloniki (Greece), University of Nicosia (Cyprus), Astana Medical University, Karaganda State Medical University (Kazakhstan), David Tvildiani Medical University, Akaki Tsereteli State University, AIETI Medical School (Georgia)).
International	• Molecular Genetics Center (Cologne, Germany, September

Internships	26–28, 2021) - Participation in the Symposium “25 Years of Progress in Molecular Medicine: From Basic Research to Clinical Application.” • European Society of Human Genetics (Vienna, Austria, August 28–31, 2021) - Participation in the European Conference on Human Genetics. • Molecular Genetics Center (Cologne, Germany, September 15–17, 2019) - Participation in the 35th Ernst Klenk Symposium on Molecular Medicine. • European Society of Human Genetics (Barcelona, Spain; May 21–24, 2016) - Participation in the 49th International Conference on Human Genetics. • Western Finland College (Huittinen, Finland; January 18–22, 2016) - Internship to improve English language proficiency. • St. George's University (UK; December 20–24, 2015) - Final coordination meeting within the ePBLnet project. • Karaganda State Medical University (Kazakhstan; October 2–7, 2015) - Participation in a coordination meeting within the Tempus ePBLnet project. • Pavol Jozef Šafárik University (Košice, Slovakia; June 24–26, 2015) - Participation in the 7th International Medical Congress. • Aristotle University (Thessaloniki, Greece; May 16–20, 2015) - Coordination meeting within the Tempus educational grant project. • David Tvildiani Medical University (Tbilisi, Georgia; May 5–7, 2014) - Participation in a coordination meeting within the Tempus educational grant project "Implementation of Innovative Educational Strategies in Medical Education and Creation of an International Network of National Training Centers."
Participation in Competitions	• Competition "Pedagogical Innovations," nomination "Innovations in Organizing Work with Applicants," project "DAYS OF SCIENCE," (author team: V.Yu. Harbuzova, E.I. Dubovik) (2018, 2nd place) • Competition "Pedagogical Innovations," project "Problem-Oriented Learning Using the Case Method" (author team: V.Yu. Harbuzova, V.M. Holubnycha, L.I. Grebenik, A.M. Loboda, O.O. Prykhodko) (2017, 1st place) • Competition for Educational and Methodological Materials posted on OpenCourseWare of Sumy State University, project "Course on Physiology for Students of the Specialty 'Medicine'" (2015, 1st place)
Publications	Author of a monograph, teaching manuals, and over 200 scientific works. Monograph by V.Yu. Harbuzova. *The Role of the Matrix Gla-*

	Protein System in the Pathogenesis of Sclerotic Lesions of Arteries and Their Complications: A Monograph. – Sumy: Sumy State University, 2020. – P. 358. 6.4 author's sheets.
Teaching Manuals	• V.Yu. Harbuzova, M.M. Demenko, O.A. Obukhova. *Physiology of Sensory Systems*. - Sumy: Sumy State University, 2022. - 48 p. • Harbuzova V.Yu, Levchenko Z.M. *Practicum on the Course "Physiology" for 2nd-Year Students of Specialties: 8.222 Medicine, 8.228 Pediatrics (Daytime Study)*. – Sumy State University, 2022. – 140 p. • Harbuzova V.Yu, Levchenko Z.M. *Practicum in Physiology for 2nd-Year Students of the Specialty "Dentistry"*. – Sumy State University, 2022. – 137 p. • Harbuzova V.Yu., Zavadskaya M.M., Obukhova O.A. *Methodical Guidelines for Independent Work on the Course "Physiology" for 2nd-Year Students of Specialties 221 "Dentistry," 222 "Medicine," 228 "Pediatrics" (Daytime Study): Educational Publication*. – Sumy: Sumy State University, 2020. – P. 330. • Obukhova O.A., Harbuzova V.Yu. *Test Problems in Physiology (State License Examination KROK – 1)*. – Sumy: SumDU, 2015. • Obukhova O.A., Harbuzova V.Yu. *Test Questions in Physiology (State Licensed Examination KROK – 1) for Second-Year Students of the Specialty 7.110101 "Medicine"*. – Sumy: SumDU, 2015. • Harbuzova V.Yu., Obukhova O.A. *The General and Cellular Basis of Medical Physiology / Electronic Edition*. – Sumy: SumSU, 2013. – 132 p. • Obukhova O.A., Harbuzova V.Yu. *Test Problems in Physiology (State License Examination KROK – 1)*. – Sumy: Sumy State University Publishers, 2011. – 106 p. • Harbuzova V.Yu., Los L.O., Obukhova O.A. *Physiology of the Blood*. Educational Manual. – Sumy: SumDU Publishing, 2010. – 164 p. • Ataman O.V., Harbuzova V.Yu. *General Physiology: Introduction to Physiology, Physiology of Excitable Structures*. Educational Manual. – Sumy: SumDU Publishing, 2009. – 160 p. • Harbuzova V.Yu., Yanchyk H.V. *Dictionary of Physiological Terms*. Educational Manual. – Sumy: SumDU Publishing, 2008. – 146 p. • Harbuzova V.Yu. *Physiology of Blood*. Educational Manual. – Sumy: SumDU Publishing, 2007. – 145 p.
Patents, Authorship Works	• Method for stopping bleeding from vessels of various types. Pogorelov M.V., Deineka V.M., Harbuzova V.Yu., Solodovnik O.V., Kalinkevich O.V., Kalinkevich O.M.,

	Danilchenko S.M. Utility model patent №105516, Ukraine, IPC A61L 15/28, filed 07.09.2015; published 25.03.2016, bulletin 6. • Method for predicting the occurrence of acute coronary syndrome considering the polymorphism of genes for inhibitors and activators of ectopic calcification. Rozumenko I.O., Harbuzova V.Yu., Matlai O.I., Obukhova O.A., Ataman O.V. Utility model patent №111586, Ukraine, IPC G01N 33/50, filed 07.06.2016; published 10.11.2016, bulletin 21. • Method for prostate biopsy. Volkogon A.D., Pogorelov M.V., Harbuzova V.Yu., Shyshchuk V.D., Konanykhin V.I., Panchenko D.V. Utility model patent №112226, Ukraine, IPC A61B 10/02, G01N 33/53, filed 23.05.2016; published 12.12.2016, bulletin 23. • Method for predicting the occurrence of ischemic atherothrombotic stroke (IATS) considering the polymorphisms of the methylenetetrahydrofolate reductase (MTHFR) gene. Matlai O.I., Harbuzova V.Yu., Snihyriova I.O., Obukhova O.A., Dubovik E.I. Utility model patent №117453, Ukraine, IPC G01N 33/50, filed 23.01.2017; published 26.06.2017, bulletin 12. • Method for predicting the development of ischemic atherothrombotic stroke. Oleshko T.B., Harbuzova V.Yu., Dubovik E.I., Ataman O.V. Utility model patent №118841, Ukraine, IPC G01N 33/50, filed 27.03.2017; published 28.08.2017, bulletin №16. • Method for predicting the development of type 2 diabetes. Marchenko I.V., Harbuzova V.Yu., Dubovik E.I., Ataman O.V. Utility model patent №131229, Ukraine, IPC G01N 33/573, filed 25.06.2018; published 10.01.2019, bulletin 1. • Method for predicting the likelihood of developing uterine leiomyoma considering the 1G/2G-1607 polymorphism of the matrix metalloproteinase (MMP-1) gene. Harbuzova V.Yu., Savchenko I.M., Ataman O.V., Obukhova O.A., Pokhmura V.V. Utility model patent №138681, Ukraine, IPC G01N 33/48, filed 07.05.2019; published 10.12.2019, bulletin 23. • Method for justifying indications for surgical treatment of patients with proliferative benign breast dysplasia based on the PvuII polymorphism of the estradiol receptor alpha gene. Lukavenko I.M., Harbuzova V.Yu., Ataman O.V., Tsyndrenko N.L., Harbuzova Ye.A. Utility model patent №142315, Ukraine, IPC G01N 33/48, filed 24.12.2019; published 25.05.2020, bulletin 10. • Method for predicting the development of renal cell carcinoma. Harbuzova V.Yu., Volkogon A.D., Ataman O.V., Kolnoguz A.V. Utility model patent №145128,

	Ukraine, IPC A61B 10/00, G01N 33/48, filed 27.05.2020; published 26.11.2020, bulletin 22. • Method for predicting the development of generalized periodontitis. Fomenko I.H., Harbuzova V.Yu., Ataman O.V., Kyrychenko M.O. Author's right to the work № 257, Ukraine, registration number 5943, 24.12.2020. • Method for predicting the development of ischemic atherothrombotic stroke among patients with arterial hypertension. Obukhova O.A., Ataman O.V., Harbuzova V.Yu., Smiianova M.V., Ramazanova D.M. Author's right to the work № 260, Ukraine, registration number 5940, 24.12.2020. • Method for predicting the development of acute coronary syndrome among patients with arterial hypertension. Author's right to the work № 400, Ukraine, registration number 6600, 28.09.2022. • Technology for optimizing physical education for older preschool children using children's fitness. Author's right to the work, Ukraine, registration number 116136, 25.01.2023. • Comprehensive assessment of children's readiness for learning in general education institutions. Demenko M.M., Harbuzova V.Yu., Obukhova O.A. Author's right to the work, Ukraine, registration number 115823, 16.01.2023.
Main Scientific Articles in Publications Indexed by the SCOPUS Scientometric Database	• Pogorielova O.S, Korniienko V.V, Chumachenko Y.D, Obukhova O.A, Martsovenko I, Harbuzova V.Y. Impact of MMP-9 Genetic Polymorphism and Concentration on the Development of Coronary Artery Disease in the Ukrainian Population. // Cardiol Res Pract. 2022 Apr 11;2022:2067632. doi: 10.1155/2022/2067632. PMID: 35449607; PMCID: PMC9017573. • Kniazkova, P. V., Harbuzova, V. Y., Pokhmura, V. V. The Link between ANRIL Gene rs4977574 Polymorphism and Common Atherosclerosis Cardiovascular Complications: A Hospital-Based Case-Control Study in the Ukrainian Population. // BioMed Research International, 2022, 8468202. https://doi.org/10.1155/2022/8468202 • Volkogon, A.D., Obukhova, O.A., Harbuzova, V.Yu., Ataman, A.V. Analysis of association between long non-coding RNA ANRIL gene rs4977574 polymorphism and bladder cancer development // Fiziolohichnyĭ zhurnal. – 2020. – Vol. 66, No. 2-3. – P. 13–20. • Prozorova, T., Tokarskyy, O., Fedoniuk, L., Harbuzova V., Egorov, A., Kamyshnyi, A. Changes in the transcriptional activity of the lymphocyte homing regulatory genes Madcam1, Cxcr3, Ccr7, and S1pr1 affect the structure of the population of T-bet+, Rorγt+, and Foxp3+ cells in mesenteric lymph nodes in the offspring of rats with

	experimental gestational diabetes // Romanian Journal of Diabetes, Nutrition, and Metabolic Diseases, 2020, 27(3), pp. 185–194. • Oleshko, T.B., Chaika, I.S., Oleshko, T.M., Harbuzova, V.Y. Influence of LYS198ASN polymorphism of endothelin-1 gene on ischemic atherothrombotic stroke characteristics // Wiadomosci lekarskie (Warsaw, Poland: 1960), 2020, 73(4), pp. 657–661. • Volkohon, A.D., Kolnoguz, A.V., Chumachenko, Y.D., Harbuzova, V.Y., Tsyndrenko, N.L. Association analysis between HOTAIR RS1899663 single nucleotide polymorphism and clear cell renal cell carcinoma development in the Ukrainian population // Wiadomosci lekarskie (Warsaw, Poland: 1960), 2020, 73(1), pp. 12–16. • Rusanov, A.V., Chumachenko, Y.D., Dubovyk, Y.I., Harbuzova, V.Yu., Ataman, A.V. Analysis of the association between C936T VEGFA gene polymorphism and diabetic foot syndrome in the Ukrainian population // Research Results in Biomedicine, 2019, Vol. 5(2), pp. 34–42. • Yaroslav D. Chumachenko, Viktoriia Yu. Harbuzova, Alexander V. Ataman. Association Study between BGLAP Gene HindIII Polymorphism and Type 2 Diabetes Mellitus Development in the Ukrainian Population // Journal of Diabetes Research. 2019. Vol. 2019. ID 9459307. – 7 p. https://www.hindawi.com/journals/jdr/2019/9302636/cta/ • Smiianova, Y.O., Pristupa, L.N., Harbuzova, V.Y., Harbuzova, Y.A. The association of LYS198ASN polymorphism of endothelin-1 gene (EDN1) with the development of arterial hypertension in the Ukrainian population // Wiadomosci lekarskie. 2019. 72(4), pp. 568–574. http://wl.medlist.org/2019_04_12/ • Fomenko, I.G., Harbuzova, V.Y., Obukhova, O.A., Pohmura, V.V., Plakhtiienko, I.A., Piven. The association of APAI-polymorphism of vitamin D receptor gene (VDR) with the development of generalized periodontitis in the Ukrainian population // Wiadomosci lekarskie. 2019. 72(7), pp. 1253–1257. http://wl.medlist.org/2019_07_05/ • Ataman, A.V., Harbuzova, V.Y., Obukhova, O.A., Dubovyk, Y.I. Analysis of Ectonucleotide Pyrophosphatase/Phosphodiesterase 1 Gene K121Q Polymorphism Association with Some Risk Factors of Atherosclerosis in Patients with Acute Coronary Syndrome // Cytology and Genetics. 2018. 52(2), pp. 127-131. https://link.springer.com/article/10.3103%2FS0095452718020020 • Dubovyk, Y.I., Oleshko, T.B., Harbuzova, Yu.V., Ataman, A.V. Positive association between EDN1 rs5370

(Lys198Asn) polymorphism and large artery stroke in a Ukrainian population // Disease Markers. 2018. 2018, 1695782. https://www.hindawi.com/journals/dm/2018/1695782/

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- Marchenko, I.V., Dubovyk, Y.I., Tkach, G.F., Maksymova, O.S., Matlai, O.I., Ataman, A.V., Harbuzova, V.Y. The association between ENPP1 rs997509 polymorphism and type 2 diabetes mellitus development in the Ukrainian population // Wiadomosci lekarskie. 2018. 71(3), pp. 490-495. http://wl.medlist.org/03a-2018-07/
- Biletskyy, D.P., Ustiansky, O.A., Maksymova, O.S., Moskalenko, P.A., Tymoshenko, A.A., Degtyarenko, A.S., Harbuzova, V.Y., Dubovyk, Y.I., Voznyi, A.P., Tkach, G.F. The histological and electron microscopic study of the parotid salivary gland in dehydrated rats of different ages // Wiadomosci lekarskie. 2018. 71(2), pp. 307-313. http://wl.medlist.org/02b-2018-10/
- Oleshko, T.B., Obukhova, O.A., Oleshko, T.M., Matlai, O.I., Sotnikov, D.D., Harbuzova, V.Y. Role of C+70G single nucleotide polymorphism of endothelin receptor A gene in the development of ischemic atherothrombotic stroke // Wiadomosci lekarskie. 2017. 70(4), pp. 725-730.
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- Dubovyk, Y.I., Harbuzova, V.Y., Ataman, A.V. G-1639A but Not C1173T VKORC1 Gene Polymorphism is Related to Ischemic Stroke and Its Various Risk Factors in the Ukrainian Population // BioMed Research International. 2016. 2016, 1298198. https://www.hindawi.com/journals/bmri/2016/1298198/
- Moiseyenko, I., Prystupa, L., Garbuzova, V., Pogorielova, O., Opolonskaya, N. Distribution of genotypes of C825T polymorphism β3-subunit G-protein gene in patients with arterial hypertension according to the degree of obesity // Georgian Medical News. 2015. (244-245), pp. 36-40.
- Savchenko, I.N., Garbuzova, V.Y. Role of single-nucleotide polymorphism C-1562T of the matrix

metalloproteinase-9 gene in the development of leiomy
- Pogorielov, M., Kalinkevich, O., Deineka, V., Garbuzova, V., Solodovnik, A., Kalinkevich, A., Kalinichenko, T., Gapchenko, A., Sklyar, A., Danilchenko, S. Haemostatic chitosan-coated gauze: In vitro interaction with human blood and in vivo effectiveness // Biomaterials Research. – 2015. – 19(1), 22. https://biomaterialsres.biomedcentral.com/articles/10.1186/s40824-015-0044-0
- Polonikov, A.V., Ushachev, D.V., Ivanov, V.P., Churnosov, M.I., Freidin, M.B., Ataman, A.V., Harbuzova, V.Y., Bykanova, M.A., Bushueva, O.Y., Solodilova, M.A. Altered erythrocyte membrane protein composition mirrors pleiotropic effects of hypertension susceptibility genes and disease pathogenesis // Journal of Hypertension. – 2015. – 33(11), 2265-2277. https://insights.ovid.com/crossref?an=00004872-201511000-00015
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- Rozumenko, I.A., Garbuzova, V.Y., Ataman, Y.A., Polonikov, A.V., Ataman, A.V. K121Q Polymorphism of the ENPP1 Gene is Related to Acute Coronary Syndrome in Ukrainian Patients with Normal but not Enhanced Body Mass Index // OnLine Journal of Biological Sciences. – 2014. – 14(4), 271-276. https://thescipub.com/abstract/10.3844/ojbsci.2014.271.276
- Harbuzova, V.I., Polonikov, O.V., Stroy, D.O., Matlai, O.I., Ataman, I.O., Sukharieva, V.A., Ataman, O.V. [Analysis of the effect of N5, N10-methylenetetrahydrofolate reductase gene C(677)-->T polymorphism on the ischemic stroke development in persons with various risk factors] // Fiziolohichnyĭ zhurnal. – 2014. – 60(2), 18-24. https://fz.kiev.ua/index.php?abs=1098
- Ataman, O.V., Polonikov, O.V., Harbuzova, V.I., Ataman, I.O., Matlai, O.I. [Analysis of matrix Gla-protein (MGP) G-7A polymorphism association with ischemic atherothrombotic stroke in persons with risk factors] // Tsitologiia i genetika. – 2013. – 47(5), 33-40.
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	with ischemic atherothrombotic stroke in humans with its different risk factors // Cytology and Genetics. – 2013. – 47(5), 287-293. https://link.springer.com/article/10.3103%2FS0095452713050034 • Harbuzova, V.I., Matlai, O.I., Ataman, I.O., Dubovyk, I.I., Borodenko, A.O., Obukhova, O.A., Ataman, O.V. [The polymorphism of matrix Gla-protein gene in ischemic atherothrombotic stroke patients] // Fiziolohichnyĭ zhurnal. – 2012. – 58(5), 14-21. • Ataman, A.V., Garbusova, V.Y., Ataman, Y.A., Matlaj, O.I., Obuchova, O.A. Investigation of the MGP promoter and exon 4 polymorphisms in patients with ischemic stroke in the Ukrainian population // Journal of Cell and Molecular Biology. – 2012. – 10(1), 19-26. https://www.semanticscholar.org/paper/Investigation-of-the-MGPpromoter-and-exon-4-in-in-Ataman-Garbuzova/3814277230e701f18c8fc0bb04c739f340915e90 • Garbuzova, V.Y., Gurianova, V.L., Stroy, D.A., Dosenko, V.E., Parkhomenko, A.N., Ataman, A.V. Association of matrix gla protein gene allelic polymorphisms (G -7→A, T -138→C and Thr 83→Ala) with acute coronary syndrome in the Ukrainian population // Experimental and Clinical Cardiology. – 2012. – 17(1), 30-33. • Harbuzova, V.I., Ataman, O.V. [Matrix Gla-protein and its role in vascular wall calcification] // Fiziolohichnyĭ zhurnal. – 2011. – 57(4), 96-112. • Harbuzova, V.I., Hur'ianova, V.L., Parkhomenko, O.M., Dosenko, V.I., Ataman, O.V. [The frequency of allelic polymorphism of matrix Gla-protein gene in acute coronary syndrome patients] // Fiziolohichnyĭ zhurnal. – 2011. – 57(3), 16-24. • Harbuzova, V.I. Effect of nifedipine, vitamin E, and bisphosphonates on intensity of lipid peroxidation in arterial and venous walls in hypervitaminosis D // Fiziolohichnyi zhurnal. – 2002. – 48(6), 70-73. • Harbuzova, V.I. Intensity of lipid peroxidation and antioxidant enzyme activity in arterial and venous walls during hypervitaminosis D // Fiziolohichnyi zhurnal. – 2002. – 48(1), 87-90. • Garbuzova, V.Y., Davidov, V.V. Catalase myocardium activity at stress in adult and old rats // Ukrain'skyi Biokhimichnyi Zhurnal. – 1999. – 71(1), 85.
Supervision of Dissertation Work	Candidate Dissertations: • Matlai O.I. "The relationship between the allele polymorphism of the MTHFR gene and the development of ischemic strokes" (defended in 2015).

	• Rozumenko I.O. "The relationship between the polymorphism of inhibitors and activators of ectopic calcification and the mechanisms of acute coronary syndrome development" (defended in 2016). • Oleshko T.B. "The relationship between the polymorphism of endothelin and endothelin receptor genes and the mechanisms of major manifestations of ischemic stroke" (defended in 2018). • Marchenko I.V. "Analysis of the association of polymorphic variants of the ENPP1 gene with specific mechanisms of type 2 diabetes pathogenesis" (defended in 2021). • Knyazkova P.V. "The role of genetic polymorphism of long non-coding RNAs in the pathogenesis of ischemic stroke" (preparation underway). • Chumachenko Y.D. "Investigation of genetic predictors of tumor development in the urogenital system" (preparation underway). • Pokhmura V.V. "Analysis of the relationship between allele polymorphism of long non-coding RNA genes and the development of ischemic stroke" (preparation underway). • Sydorchuk A.R. "Mechanisms of endothelial dysfunction in patients with arterial hypertension considering their development predictors" (preparation underway). • Shkatula P.Yu. "Pathogenetic significance of BsmI, ApaI, TaqI polymorphic variants of the vitamin D receptor gene (VDR) in the development of myopia" (preparation underway).
Supervision of Student Research	• Roschupkin A.A. "The connection between the polymorphism rs3200401 of the MALAT1 gene and kidney cancer in the Ukrainian population" (2019, All-Ukrainian student research competition, section "Biological Sciences," 1st degree diploma). • Zarva A.O. "Frequency of allele variants of the ecto-nucleotide pyrophosphatase/phosphodiesterase 1 (ENPP1) gene in the Ukrainian population" (2018, All-Ukrainian student research competition, section "Biological Sciences," without placement). • Sviridenko D.Yu. "The role of the Lys198Asn polymorphism of the endothelin-1 gene in the pathogenesis of ischemic atherothrombotic stroke" (2017, All-Ukrainian student research competition, section "Theoretical Medicine," 2nd degree diploma). • Sukhareva V.A. "Association of polymorphic variants of the methylene tetrahydrofolate reductase gene with ischemic stroke and some risk factors" (2016, All-

	Ukrainian student research competition, section "Clinical Medicine," 2nd degree diploma). • Sukhareva V.A. "The relationship of the C677T polymorphic variants of the N5,N10-methylene tetrahydrofolate reductase (MTHFR) gene with ischemic atherothrombotic stroke and some of its risk factors" (2015, All-Ukrainian student research competition, section "Theoretical Medicine," 1st degree diploma). • Prasol D.A. "Association of the K121Q polymorphism of the ecto-nucleotide pyrophosphatase/phosphodiesterase (ENPP1) gene with acute coronary syndrome and some of its risk factors" (2015, All-Ukrainian student research competition, section "Biological Sciences," 1st degree diploma). • Sukhareva V.A. "The relationship of the single nucleotide polymorphism C677T of the methylene tetrahydrofolate reductase gene with some anthropometric indicators in individuals of different sexes" (2014, All-Ukrainian student research competition, section "Biological Sciences," 1st degree diploma). • Shimko K.A. "Association of the AraI polymorphism of the vitamin D receptor gene with risk factors for ischemic atherothrombotic stroke" (2014, All-Ukrainian student research competition, section "Theoretical Medicine," 2nd degree diploma). • Dubovik Y.I. "The relationship of polymorphisms of the matrix Gla-protein gene with ischemic atherothrombotic stroke and some of its risk factors" (2013, All-Ukrainian student research competition, section "Clinical Medicine," 1st degree diploma). • Butko V.V. "Association of the BsmI polymorphism of the vitamin D receptor gene with risk factors for ischemic atherothrombotic stroke" (2013, All-Ukrainian student research competition, section "Biological Sciences," 1st degree diploma). • Dubovik Y.I. "Investigation of the association of the allele polymorphism of the matrix Gla-protein gene with some risk factors for acute coronary syndrome in the Ukrainian population" (2012, All-Ukrainian student research competition, section "Theoretical Medicine," 1st degree diploma). • Dubovik Y.I. "Investigation of the allele polymorphism of the matrix Gla-protein gene (MGP) in patients with acute coronary syndrome in the Ukrainian population" (2011, All-Ukrainian student research competition, section "Biological Sciences," 1st degree diploma).
Professional Development	• 2023: Sumy State University. Based on the cumulative system's performance indicators, 6 ECTS credits.

- 2023: Basic course for trainers in adult education and learning (based on the Curriculum GlobALE program). Qualification certificate No. KG0050.
- 2018: Sumy State University. Thematic focus: "Physiology" (certificate No. 2866).
- 2015: St. George's University (London) "Problem-Based Learning (PBL) Training."
- 2013: Sumy State University "Mechanisms of Regulation of Physiological Functions."
- 2010: National Medical Academy of Postgraduate Education named after P.L. Shupyk "Polymerase Chain Reaction in Laboratory Diagnosis of Infectious Diseases."
- 2008: National Medical University named after O.O. Bogomolets "Higher Medical Education and the Bologna Process."
- 2003: National Medical University named after O.O. Bogomolets "Normal Physiology."

<u>Online Courses:</u>

- 2014:

- "Principles of Written English" (Berkeley University)
- "Global Health: Case Studies from a Biosocial Perspective" (Harvard University)
- "Introduction to Bioethics" (Georgetown University)
- "Data Analysis for Genomics" (Harvard University)
- "Genomic Medicine Gets Personal" (Georgetown University);

- 2015:
- "Light, Sight, Spike: The Neuroscience of Vision" (Massachusetts Institute of Technology)
- "Preparing for the AP Biology Exam, Part 2 – Genetics" (Rice University)
- "English Grammar and Essay Writing" (Berkeley University)
- "Proteins: Biology's Workforce" (Rice University)
- "Cellular Mechanisms of Brain Function" (École Polytechnique Fédérale de Lausanne)
- "Preparing for the AP Biology Exam, Part 4 – Ecology" (Rice University)
- "Academic and Business Writing" (Berkeley University)
- "Preparing for the AP Biology Exam, Part 5 – Review and Exam Preparation" (Rice University)