



# Curriculum Vitae

Zholos O.V.

## PERSONAL INFORMATION



### Oleksandr V. Zholos

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[http://science.univ.kiev.ua/en/researchgroups/research.php?ELEMENT\\_ID=2697](http://science.univ.kiev.ua/en/researchgroups/research.php?ELEMENT_ID=2697)

Account (profile) in scientific metric databases:

Scopus Author ID: [7003304110](#)

Web of Science ResearcherID: [A-7017-2011](#)

ORCID ID: [orcid.org/0000-0002-4320-149X](http://orcid.org/0000-0002-4320-149X)

Publons: <https://publons.com/researcher/1213310/alexander-zholos/>

Sex M | Data of Birth 10/11/1959 | Citizenship Ukraine

Research degree (degree, speciality)	2000 – Doctor of Biological Sciences (03.00.02 - Biophysics) 1987 – PhD (03.00.02 - Biophysics)
Title	2014 – Professor in Biophysics (Ministry of Education and Science of Ukraine) 2005 – Professor (Vascular Physiology/Vascular Biology) (Queen's University Belfast, UK) 2005 – Professeur des universités (Physiology) (Ministry of Education, Higher Education and Research, Paris, France) 2004 – Senior Research Scientist (Biophysics) (Higher Attestation Commission of Ukraine)
Current post	Head of department
Department	Department of Biophysics and Medical Informatics
Faculty/Institute	Educational and Scientific Centre "Institute of Biology and Medicine", Taras Shevchenko National University of Kyiv

## Academic disciplines, which have been taught:

Current year 2022/2023	<b>BSc</b> <ol style="list-style-type: none"><li>1. Modern Information Technologies in Biology (2<sup>nd</sup> Year)</li><li>2. Biophysics (3<sup>rd</sup> Year)</li><li>3. Electrobiophysics and biophysics of ion channels (4<sup>th</sup> Year)</li><li>4. Pharmacology (4<sup>th</sup> Year)</li></ol> <b>MSc</b> <ol style="list-style-type: none"><li>1. Bioinformatics (1<sup>st</sup> Year)</li><li>2. Basis of Neurobiology (2<sup>st</sup> Year)</li></ol> <b>PhD</b> <ol style="list-style-type: none"><li>1. Philosophy of Science and Innovations (professional-technological module , 1<sup>st</sup> Year)</li></ol>
Previous periods 2011-2020	<b>Educational and Scientific Centre "Institute of Biology and Medicine", Taras Shevchenko National University of Kyiv</b> <b>BSc</b> <ol style="list-style-type: none"><li>1. Modern Information Technologies in Biology (2<sup>nd</sup> Year)</li><li>2. Medical Informatics (2<sup>nd</sup> Year)</li><li>3. Biophysics (3<sup>rd</sup> Year)</li><li>4. Principles of molecular modelling (3<sup>rd</sup> Year)</li><li>5. Laboratory practicals in Biophysics (3<sup>rd</sup> and 4<sup>th</sup> Years)</li><li>6. Electrobiophysics (4<sup>th</sup> Year)</li><li>7. Practicals in Physiology (4<sup>th</sup> Year)</li><li>8. Laboratory practicals in Human and Animal Physiology (4<sup>th</sup> Year)</li><li>9. Physiology of Blood and Respiration (4<sup>th</sup> Year)</li></ol> <b>MSc</b> <ol style="list-style-type: none"><li>1. Bioinformatics (1<sup>st</sup> Year)</li><li>2. Medical Informatics (1<sup>st</sup> Year, Medicine)</li><li>3. Basis of Modern Pharmacology (1<sup>st</sup> Year, in English)</li></ol>

2006-2011	<ol style="list-style-type: none"> <li>4. Molecular and system mechanisms of drug action (1<sup>st</sup> Year)</li> <li>5. Biology: from theory to practice (1<sup>st</sup> Year)</li> <li>6. Pharmacology and Cellular Pathology (1<sup>st</sup> Year)</li> <li>7. Experimental methods of investigation in Biology (1<sup>st</sup> Year)</li> <li>8. Physiological Basis of Clinical Pathology (1<sup>st</sup> Year)</li> <li>9. Pharmacology (1<sup>st</sup> Year)</li> <li>10. Biophysics of Macromolecules (1<sup>st</sup> Year)</li> <li>11. Methodology and organisation of research in Biology (1<sup>st</sup> Year)</li> <li>12. Biophysics of Transport Processes (2<sup>nd</sup> Year)</li> <li>13. Electrogenesis in Living Systems (2<sup>nd</sup> Year)</li> <li>14. Biophysics of Ion Channels (2<sup>nd</sup> Year)</li> <li>15. Medical Biophysics (2<sup>nd</sup> Year)</li> <li>16. Biophysics Methods of Research (2<sup>nd</sup> Year)</li> <li>17. Biophysics of transport processes (2<sup>nd</sup> Year)</li> <li>18. Pharmacology (3<sup>rd</sup> Year, Medicine)</li> </ol> <p>PhD</p> <ol style="list-style-type: none"> <li>1. Philosophy of Science and Innovations (professional-technological module, 1<sup>st</sup> Year)</li> </ol>
2002-2005	<p><b>School of Medicine, Dentistry and Biomedical Sciences, Queen's University Belfast, UK:</b></p> <ol style="list-style-type: none"> <li>1. Human Structure and Function: Systematic Body Systems (1<sup>st</sup> Year BSc, Medicine)</li> <li>2. Physiology (1<sup>st</sup> Year BSc, Pharmacy)</li> <li>3. Human Biology (1<sup>st</sup> and 2<sup>nd</sup> Years BSc, Medicine)</li> <li>4. Physiological Basis of Clinical Practice (2<sup>nd</sup> Year BSc, Medicine)</li> <li>5. Advanced Cell Physiology (3<sup>rd</sup> Year BSc, Medicine)</li> <li>6. Advanced Cardiovascular Physiology (3<sup>rd</sup> Year BSc, Medicine)</li> <li>7. Automated data analysis (1<sup>st</sup> Year PhD students)</li> </ol>
2004-2005	<p><b>Faculty of Biology, Taras Shevchenko National University of Kyiv:</b></p> <ol style="list-style-type: none"> <li>1. Quantitative Pharmacology (4<sup>th</sup> Year BSc)</li> <li>2. Mechanisms of Cellular Communication (2<sup>nd</sup> Year MSc)</li> </ol> <p><b>Lille University of Science and Technology, France:</b></p> <ol style="list-style-type: none"> <li>1. Cellular Physiology &amp; Pharmacology (1<sup>st</sup> and 2<sup>nd</sup> Years MSc)</li> </ol>

## RESEARCH AND TEACHING EXPERIENCE

Period	Stage (description)
(2017 - present)	<p>Post <u>Head of the Department of Biophysics and Medical Informatics</u></p> <p>64/13, Volodymyrska Street, Kyiv, Ukraine, 01601, web page: <a href="http://www.univ.kiev.ua">http://www.univ.kiev.ua</a></p> <p>Area of work or sector Education/Research</p>
(2011 - 2017)	<p>Post <u>Professor of the Department of Biophysics</u></p> <p>64/13, Volodymyrska Street, Kyiv, Ukraine, 01601, web page: <a href="http://www.univ.kiev.ua">http://www.univ.kiev.ua</a></p> <p>Area of work or sector Education/Research</p>
(2006 - 2011)	<p>Post <u>Professor, Director of Research of the Cardiovascular Biomedical Research Centre</u></p> <p>Queen's University Belfast, University Road, Belfast BT7 1NN, UK, web page: <a href="https://www.qub.ac.uk">https://www.qub.ac.uk</a></p> <p>Area of work or sector Education/Research</p>
(2005 - 2006)	<p>Post <u>Professor of the Department of Biophysics</u></p> <p>64/13, Volodymyrska Street, Kyiv, Ukraine, 01601, web page: <a href="http://www.univ.kiev.ua">http://www.univ.kiev.ua</a></p> <p>Area of work or sector Education/Research</p>
(2004 - 2005)	<p>Post <u>Invited Professor</u></p> <p>Lille 1 University of Science and Technology, Cité Scientifique, 59650 Villeneuve-d'Ascq, France, web page: <a href="http://www.univ-lille1.fr">http://www.univ-lille1.fr</a></p> <p>Area of work or sector Education/Research</p>
(2003 - 2005)	<p>Post <u>Head of Laboratory of Molecular Pharmacology of Cellular Receptors and Ion Channels</u></p> <p>O.O. Bogomoletz Institute of Physiology of the National Academy of Sciences of Ukraine, 4, Academician Bogomoletz Street, Kyiv, Ukraine, 01024, web page: <a href="http://biph.kiev.ua">http://biph.kiev.ua</a></p> <p>Area of work or sector Research</p>
(1981 - 2003)	<p>Post <u>from Laboratory Assistant to Leading Research Scientist</u></p>

	O.O. Bogomoletz Institute of Physiology of the National Academy of Sciences of Ukraine, 4, Academician Bogomoletz Street, Kyiv, Ukraine, 01024, web page: <a href="http://biph.kiev.ua">http://biph.kiev.ua</a>
	Area of work or sector Research
(1991 - 2001)	Post <u>Senior Research Fellow</u>
	St. George's Hospital Medical School, University of London, Cranmer Terrace, London SW17 0RE, UK, web page: <a href="https://www.sgul.ac.uk">https://www.sgul.ac.uk</a>
	Area of work or sector Research
(1990 - 1991)	Post <u>Visiting Scholar</u>
	College of Medicine, The Ohio State University, 281 W Lane Avenue, Columbus, OH 43210, USA, web page: <a href="https://www.osu.edu">https://www.osu.edu</a>
	Area of work or sector Research

## EDUCATION AND INTERNSHIP

Period	Stage (description)
(1976 - 1981)	<u>T.G. Shevchenko Kyiv State University</u>
	Qualification BSc (Hons), 1 <sup>st</sup> Class, Biologist-Biophysicist, Lecturer in Biology and Chemistry
(1982 - 1984)	<u>2<sup>nd</sup> Kyiv City state courses in foreign languages</u>
	Completed full course of the English language
(2018 - 2019)	<u>Anadolu University, Turkey</u>
	Participated in the international academic exchange program Mevlana (certificate 75291613-203.99).
(2021)	<u>Taras Shevchenko National University of Kyiv, Center of innovation development</u>
	Completed training in using online interactive panels (boards), certificate dated 16/03/2021, KNU Teach Week, certificate dated 09/06/2021.
(2021)	<u>O.O. Bogomoletz Institute of Physiology, National Academy of Sciences of Ukraine</u>
	Internship

## PERSONAL COMPETENCIES

Name	Level (description)
Native language	Ukrainian
Foreign language 1	English (fluent)
Communication competence	Gave invited lectures at universities in the United Kingdom, USA, France, Germany, South Korea, Slovak Republic. Gave plenary lectures and oral communications at numerous international research symposia.
Organisational/management competence	Supervised research laboratory (O.O. Bogomoletz Institute of Physiology of the National Academy of Sciences of Ukraine), Research Centre (Queen's University Belfast, UK), department (Educational and Scientific Centre "Institute of Biology and Medicine", Taras Shevchenko National University of Kyiv). Headed international research projects funded by The Wellcome Trust (UK), British Heart Foundation (UK), National Institutes of Health (USA), NI Chest Heart & Stroke (Northern Ireland, UK), Biotechnology and Biological Sciences Research Council (UK), The Royal Society (UK), The Physiological Society (UK), Mext (Japan), DEL (UK), European Social Fund (EC).
Computer competencies	<b>Information analysis:</b> Professional user of MS Office, pClamp (Molecular Devices), Origin (OriginLab), ImageJ (NIH), ClustalX. <b>Content development (software, web sites):</b> developed web-site of the 3 <sup>rd</sup> Kyiv international symposium "Smooth muscle physiology, biophysics and pharmacology" (SMPBP-2017) ( <a href="http://smphys.in.ua/">http://smphys.in.ua/</a> ), programs for automated analysis of pClamp data in Origin: <a href="http://www.originlab.com/fileExchange/details.aspx?fid=315">http://www.originlab.com/fileExchange/details.aspx?fid=315</a> <a href="https://www.originlab.com/fileExchange/details.aspx?fid=357">https://www.originlab.com/fileExchange/details.aspx?fid=357</a>
Other computer skills	User of Adobe Photoshop, Adobe ImageReady for scientific image editing and analyzing.
Areas of professional interests	Biophysics, Physiology, Molecular Biology, Neurophysiology, Electrophysiology, Pharmacology, Biomedical Informatics, voltage- and ligand-gated ion channels, membrane receptors, calcium signalling, second messengers, G-proteins, TRP channels, smooth muscles, endothelial and epithelial cells, patch-clamp, laser confocal microscopy, microelectrode techniques, computer modelling.

## ADDITIONAL INFORMATION

Name	(titles of publications, presentations, projects, conferences, seminars, distinctions, membership in Academies, professional and scientific associations etc)
Publications	<ol style="list-style-type: none"> <li>1. Soloviev A., Ivanova I., Sydorenko V., Sukhanova K., Melnyk M., Dryn D., Zholos A. (2023). Calcium-dependent modulation of BK<sub>Ca</sub> channel activity induced by plasmonic gold nanoparticles in pulmonary artery smooth muscle cells and hippocampal neurons. <i>Acta Physiologica</i> 2023 Jan 4;e13922. doi: 10.1111/apha.13922.</li> <li>2. Korogod S.M., Tsagareli M., Delmas P., Zholos A.V. (2022). Temperature-dependent mechanisms of neuron functioning: Emerging concepts (Editorial). <i>Frontiers in Cellular Neuroscience</i> 16:1009071.</li> <li>3. TRiPs across epithelial and endothelial barriers in health and disease. Editors A.V. Zholos, G.M. Tolstanova, Nova Science Publishers, New York. – 2021, 257 pp. ISBN: 978-1-68507-020-5. Chapter 1 "Overview of TRP channels" (pp. 3-23), Chapter 2 "Calcium-dependent regulation of barrier's integrity with focus on TRP channels" (pp. 25-40), Chapter 5 "Role of TRP channels in calcium signalling in skin and airways" (pp. 83-105).</li> <li>4. Ivanova I.V., Melnyk M.I., Dryn D.O., Prokhorov V.V., Zholos A.V., Soloviev A.I. (2021). Electrophysiological characterization of the activating action of a novel liposomal nitric oxide carrier on Maxi-K channels in pulmonary artery smooth muscle cells. <i>Journal of Liposome Research</i> 2021 Jan 8;1-10.</li> <li>5. Nozdrenko D., Matvienko T., Vygovska O., Soroca V., Bogutska K., Zholos A., Scharff P., Ritter U., Prylutsky Yu. (2021). Post-traumatic recovery of muscle soleus in rats is improved via synergistic effect of C60 fullerene and TRPM8 agonist menthol. <i>Applied Nanoscience</i> (2021). <a href="https://doi.org/10.1007/s13204-021-01703-z">https://doi.org/10.1007/s13204-021-01703-z</a>.</li> <li>6. Melnyk M.I., Dryn D.O., Al Kury L.T., Dziuba D.O., Zholos A.V. (2020). Suppression of mI<sub>CAT</sub> in mouse small intestinal myocytes by general anaesthetic ketamine and its recovery by TRPC4 agonist (-)-englerin A. <i>Frontiers in Pharmacology</i> 11: 594882.</li> <li>7. Melnyk M.I., Ivanova I.V., Dryn D.O., Prylutsky Y.I., Hurmach V.V., Platonov M., Al Kury L.T., Ritter U., Soloviev A.I., Zholos A.V. (2019). C<sub>60</sub> fullerenes selectively inhibit BK<sub>Ca</sub> but not K<sub>v</sub> channels in pulmonary artery smooth muscle cells. <i>Nanomedicine: Nanotechnology, Biology and Medicine</i> 19, 1-11.</li> <li>8. Storozhuk M.V., Moroz O.F., Zholos A.V. (2019). Multifunctional TRPV1 ion channels in physiology and pathology with focus on the brain, vasculature, and some visceral systems. <i>BioMed Research International</i> 2019, 1-12.</li> <li>9. Melnyk M.I., Dryn D.O., Al Kury L.T., Zholos A.V., Soloviev A.I. (2019). Liposomal quercetin potentiates maxi-K channel openings in smooth muscles and restores its activity after oxidative stress. <i>Journal of Liposome Research</i> 29(1), 94-101.</li> <li>10. Moroz O., Zholos A. (2019). Uterine myocytes: development, structure and function. In: "Advances in Medicine and Biology", Editor L.V. Berhardt, Nova Science Publishers, Inc., vol. 148, Chapter 2, 27-96.</li> <li>11. Zholos A.V., Moroz O.F., Storozhuk M.V. (2019). Curcuminoids and novel opportunities for the treatment of Alzheimer's disease: which molecules are actually effective? <i>Current Molecular Pharmacology</i> 12 (1), 12-26.</li> <li>12. Luo J., Qian A., Oetjen L.K., Yu W., Yang P., Feng J., Xie Z., Liu S., Yin S., Dryn D., Cheng J., Riehl T.E., Zholos A.V., Stenson W.F., Kim B.S., Hu H. (2018). TRPV4 channel signaling in macrophages promotes gastrointestinal motility via direct effects on smooth muscle cells. <i>Immunity</i> 49(1),107-119, e4.</li> <li>13. Feng J., Yang P., Mack M.R., Dryn D., Luo J., Gong X., Liu S., Oetjen L.K., Zholos A.V., Mei Z., Yin S., Kim B.S., Hu H. (2017). Sensory TRP channels contribute differentially to skin inflammation and persistent itch. <i>Nature Communications</i> 8 (1), 980 (1-12).</li> <li>14. Melnyk M.I., Dryn D.O., Al Kury L.T., Zholos A.V., Soloviev A.I. (2019). Liposomal quercetin potentiates maxi-K channel openings in smooth muscles and restores its activity after oxidative stress. <i>Journal of Liposome Research</i> 29(1), 94-101.</li> <li>15. Storozhuk M.V., Zholos A.V. (2018). TRP channels as novel targets for endogenous ligands: focus on endocannabinoids and nociceptive signalling. <i>Current Neuropharmacology</i> 16 (2), 137-150.</li> <li>16. Dryn D., Luo J., Melnyk M., Zholos A., Hu H. (2018). Inhalation anaesthetic isoflurane inhibits the muscarinic cation current and carbachol-induced gastrointestinal smooth muscle contractions. <i>European Journal of Pharmacology</i> 820, 39-44.</li> <li>17. Dryn D.O., Melnyk M.I., Al Kury L.T., Prylutsky Yu.I., Ritter U., Zholos A.V. (2018). C<sub>60</sub> fullerenes disrupt cellular signalling leading to TRPC4 and TRPC6 channels opening by the activation of muscarinic receptors and G-proteins in small intestinal smooth muscles. <i>Cellular Signalling</i> 43, 40-46.</li> <li>18. Melanaphy D., Johnson C.D., Kustov M.V., Watson C.A., Borysova L., Burdyga T.V., Zholos A.V. (2016). Ion channel mechanisms of rat tail artery contraction-relaxation by menthol involving,</li> </ol>

	<p>respectively, TRPM8 activation and L-type Ca<sup>2+</sup> channel inhibition. <i>American Journal of Physiology</i> 311, H1416-H1430.</p> <ol style="list-style-type: none"> <li>19. McGahon M.K., Fernández J.A., Dash D.P., McKee J., Simpson D.A., Zholos A.V., McGeown J.G., Curtis T.M. (2016). TRPV2 channels contribute to stretch-activated cation currents and myogenic constriction in retinal arterioles. <i>Investigative Ophthalmology &amp; Visual Science</i> 57, 5637-5647.</li> <li>20. Dryn D.O., Gryshchenko A.V., Bolton T.B., Zhu M.X., Zholos A.V. (2016). Species-related differences in the properties of receptor-operated TRPC4 channels in intestinal myocytes of rodents. <i>Neurophysiology</i> 48 (4), 220-229.</li> <li>21. Bidaux G., Sgobba M., Lemonnier L., Borowiec A.S., Noyer L., Jovonovic S., Zholos A.V., Haider S. (2015). Functional and modelling studies of the transmembrane region of the TRPM8 channel. <i>Biophysical Journal</i> 109 (9), 1840-1851.</li> <li>22. Soloviev A., Zholos A., Ivanova I., Novokhatska T., Tishkin S., Raevska A., Stroyuk A, Yefanov V. (2015). Plasmonic gold nanoparticles possess the ability to open potassium channels in rat thoracic aorta smooth muscles in a remote control manner. <i>Vascular Pharmacology</i> 72, 190-196.</li> <li>23. Zholos A.V. (2015). TRP channels in respiratory pathophysiology: the role of oxidative, chemical irritant and temperature stimuli. <i>Current Neuropharmacology</i> 13 (2), 279-291.</li> <li>24. Zholos A.V., McGarvey L., Ennis M. (2015). TRPs in respiratory disorders: opportunities beyond TRPA1. In: "TRP Channels as Therapeutic Targets: From Basic Science to Clinical Use". Editor A. Szallasi. Elsevier, Academic Press, 536 pp., Chapter 26, 483-500.</li> <li>25. Stott J.B., deCoursey F., Ennis M., Zholos A.V. (2014). Functional and pharmacological characterization of volume-regulated anion channels in human normal and cystic fibrosis bronchial and nasal epithelial cells. <i>European Journal of Pharmacology</i> 740, 183-191.</li> <li>26. McGarvey L.P., Butler C.A., Stokesberry S., Polley L., McQuaid S., Abdullah H., Ashraf S., McGahon M.K., Curtis T.M., Arron J., Choy D., Warke T.J., Bradding P., Ennis M., Zholos A., Costello R., Heaney L.G. (2014). Increased expression of bronchial epithelial transient receptor 1 potential vanilloid 1 channels in severe asthma. <i>Journal of Allergy and Clinical Immunology</i> 133 (3), 704-712.</li> <li>27. Zholos A.V. (2014). TRPC5. In "Mammalian Transient Receptor Potential (TRP) Cation Channels", <i>Handbook of Experimental Pharmacology</i>, Editors B. Nilius, V. Flockerzi, Springer-Verlag Berlin Heidelberg, 222 (Vol.1, Part 1, 726 pp.), 129-156.</li> </ol> <p>In total over 290 publications, including 36 reviews, collective monographs (Springer, Academic Press, Springer-Verlag, CRC Press etc.) and textbooks.</p>
Presentations	<p>Gave lectures to members of MAS of Ukraine, participated in projects: Sciences.in.UA, , "Study abroad Dynamical Neuroscience in Ukraine" (with the University of Georgia, Atlanta, USA), Mevlana (with Anadolu University, Eskişehir), BioMedTaks-2019.</p>
Projects	<p>2022-2024: "Ion and oxalate transport as a key factor in chronic kidney disease and associated pathologies" (Ministry of Education and Science of Ukraine, PI).</p> <p>2019-2021: "Molecular and cellular mechanisms of TRP channelopathies" (Ministry of Education and Science of Ukraine, PI).</p> <p>2019-2020: "Ion and membrane mechanisms of the regulation of calcium homeostasis and contractile activity of the myometrium at different stages of pregnancy" (Department of Targeted Training of Taras Shevchenko National University of Kyiv at the National Academy of Sciences of Ukraine, Co-PI).</p> <p>2017-2018: "Development and preclinical studies of liposomal complex for the transport of nitric oxide" (scientific-technical development by state order, Co-PI).</p> <p>2017-2018: "Properties, mechanisms of regulation and functional role of the systems for passive and energy-dependent transport of Ca ions in smooth muscle cells" (Department of Targeted Training of Taras Shevchenko National University of Kyiv at the National Academy of Sciences of Ukraine, Co-PI).</p> <p>2011-2016: "The role of mechanosensitive TRP channels in arteriolar myogenic signalling and blood flow autoregulation" (Biotechnology and Biological Sciences Research Council, UK, Co-I).</p> <p>2009-20014: "Molecular mechanism of regulation of ml(CAT) in intestinal smooth muscle cells" (National Institutes of Health, USA, Co-I).</p> <p>2009-2013: "Funding towards a combined system for confocal imaging and patch clamp" (British Heart Foundation Infrastructure Award, UK, PI).</p> <p>2010-2012: "The role of TRPM8 cold receptor in endothelial signalling and thermal behaviour of blood vessels" (British Heart Foundation, UK, PI).</p> <p>2009-2011: "The expression and functional role of bronchial epithelial transient receptor potential (TRP) channels in airway responses to inhaled irritants in asthmatic and cough patients" (Northern Ireland Chest Heart &amp; Stroke, Northern Ireland, UK, Co-I).</p>

	<p>2008-2011: "Correction of defective chloride transport in cystic fibrosis epithelial cells" (DEL, UK, Co-I).  2007-2010: "Expression and function of TRPM8 calcium channel in the vasculature" (British Heart Foundation, UK, PI).  2007-2009: "Impact of the TRPM8 channel on calcium signalling in vascular smooth muscle cells" (The Physiological Society, UK, PI).  2007-2010: "Characterisation of the biothermosensor molecule TRPM8 in blood vessels" (European Social Fund, PI).  2006-2008: "Enhanced vascular contractility in diabetes: the role of calcium sensitization" (The Royal Society, UK, PI).  2006-2007: "Pathophysiology of vascular smooth muscle cells" (Mext, Japan, PI).  2001-2004: "Functional regulation and single channel properties of the muscarinic receptor-gated cationic conductance in smooth muscle cells" (The Wellcome Trust, UK, PI).</p>
Research Symposia	<ol style="list-style-type: none"> <li>1. Europhysiology 2022, Copenhagen, Denmark, 16-18 September 2022.</li> <li>2. All-Ukrainian conference in Neurosciences, Kyiv, 25-27 July 2022.</li> <li>3. The Physiological Society Scientific Meeting "New Roles for Ion Channels and Transporters in Health and Disease", UK, 2-3 September 2021.</li> <li>4. 7<sup>th</sup> International conference "Nanobiophysics: Fundamental and Applied Aspects", Kharkiv, Ukraine, 4 – 8 October 2021.</li> <li>5. The Physiological Society Scientific Meeting "Physiology 2021", UK, 12-16 July 2021.</li> <li>6. EUROANAESTHESIA 2020, The European Anaesthesiology Congress, 28-30 November 2020.</li> <li>7. 22<sup>nd</sup> Congress of the European Society for Sexual Medicine, Prague, Czech Republic, 23-25 January 2020.</li> <li>8. Scientific and practical conference «Modern scientific achievements in experimental and laboratory medicine» in the framework of International Congress in Laboratory Medicine. Kyiv, 23-25 September 2020.</li> <li>9. 13<sup>th</sup> Congress of the European Society of Gynecology, Vienna, Austria, 16-19 October 2019.</li> <li>10. The Physiological Society Scientific Meeting "Physiology 2019", Aberdeen, UK, 8-10 July 2019.</li> <li>11. XX congress of the P.G. Kostyuk Ukrainian Physiological Society, Kyiv, Ukraine, 27-30 May 2019.</li> <li>12. Thematic VII meeting of the Ukrainian Biophysical Society, Kyiv, Ukraine, 29-31 October 2018.</li> <li>13. 3<sup>rd</sup> Kyiv International Symposium "Smooth Muscle Physiology, Biophysics &amp; Pharmacology: from genes and molecules to functions, disorders and their novel treatment opportunities", Kyiv-Lutsk, Ukraine, 18-22 September 2017.</li> <li>14. VIII International Scientific Conference "Psychophysiological and Visceral Functions in Norm and Pathology", Kyiv, Ukraine, 18-20 October 2017.</li> <li>15. VII Congress of the Ukrainian Society for Neuroscience, Kyiv, Ukraine, 7-11 June 2017.</li> <li>16. The Physiological Society Scientific Meeting "Physiology 2016", Dublin, Ireland, 29-31 July 2016.</li> </ol> <p><a href="#">In total 178 abstracts of communications at national and international research symposia.</a></p>
Membership	<ol style="list-style-type: none"> <li>1. Member of the Academy of Sciences of Higher Education of Ukraine, section Biology (elected in 2017).</li> <li>2. Ukrainian Biophysical Society. Elected Learned Secretary in 2011, elected President of the Society in 2019.</li> <li>3. P.G. Kostyuk Ukrainian Physiological Society.</li> <li>4. Ukrainian Society for Neuroscience.</li> <li>5. Federation of European Neuroscience Societies.</li> <li>6. The Physiological Society (United Kingdom). Elected Fellow of The Physiological Society (<i>FPhysiol</i>) in 2017.</li> <li>7. Member of the Specialized Learned Council of the ECS "Institute of Biology and Medicine", Taras Shevchenko National University of Kyiv.</li> <li>8. Member of the Specialized Learned Council of O.O. Bogomoletz Institute of Physiology, National Academy of Sciences of Ukraine.</li> <li>9. Member of Scientific Council of the Ministry of Education and Science of Ukraine, Section "Biology, biotechnology and current problems of medical sciences".</li> <li>10. Member of the Scientific Committee of the National Council for Science &amp; Technology (2019-2021).</li> <li>11. Member of the Scientific Committee of the Ministry of Health of Ukraine (elected in 2019).</li> </ol> <p><b>Membership of Editorial Boards:</b> Frontiers in Pharmacology, Frontiers in Cellular Neuroscience, International Journal of Physiology and Pathophysiology, Current Molecular Pharmacology, Current Neuropharmacology, Medicinal Chemistry.</p> <p><b>Evaluation of international grant proposals:</b> Medical Research Council, The Wellcome Trust, British Heart Foundation, The Royal Society, Biotechnology and Biological Sciences Research Council (BBSRC), Czech Science Foundation, Research Foundation Flanders Fonds Wetenschappelijk Onderzoek (FWO),</p>

	United States-Israel Binational Science Foundation (BSF).
Citations	Scopus: 2908 citations by 2121 documents, h-index 3

## SUPPLEMENTS

Name	Link
Publications	PubMed: <a href="https://www.ncbi.nlm.nih.gov/pubmed?term=zholos%5Bauthor%5D&amp;cmd=detailssearch">https://www.ncbi.nlm.nih.gov/pubmed?term=zholos%5Bauthor%5D&amp;cmd=detailssearch</a> Scopus: <a href="https://www.scopus.com/authid/detail.uri?authorId=7003304110">https://www.scopus.com/authid/detail.uri?authorId=7003304110</a> Publons: <a href="https://publons.com/researcher/1213310/alexander-zholos/">https://publons.com/researcher/1213310/alexander-zholos/</a> ORCID: <a href="https://orcid.org/0000-0002-4320-149X">https://orcid.org/0000-0002-4320-149X</a> ResearcherID <a href="http://www.researcherid.com/rid/A-7017-2011">http://www.researcherid.com/rid/A-7017-2011</a> Mendeley: <a href="https://www.mendeley.com/profiles/alexander-zholos/">https://www.mendeley.com/profiles/alexander-zholos/</a> Google Scholar: <a href="https://scholar.google.com/citations?authuser=1&amp;user=2xcR25IAAAAJ">https://scholar.google.com/citations?authuser=1&amp;user=2xcR25IAAAAJ</a>
Projects	ResearchGate: <a href="https://www.researchgate.net/profile/Alexander_Zholos/projects">https://www.researchgate.net/profile/Alexander_Zholos/projects</a>
Research	<p>Prof. Zholos has long-standing interests in ion channel research and over 30 years of hands-on and supervisory experience in this area. This research employs patch-clamp recording techniques in combination with calcium imaging and molecular biology approaches. It includes investigation of single ion channel mechanisms and the roles of multiple ligands in the regulation of novel TRP channels, as well as voltage-gated and receptor-operated channels in excitable and non-excitable cells. He has characterised Ca<sup>2+</sup>-induced Ca<sup>2+</sup> release in visceral smooth muscles and voltage dependence of G-protein signalling. He investigated physiological and pathophysiological roles of several types of ion channels (in particular, in cystic fibrosis, bronchial asthma, hypertension, diabetes mellitus, inflammation). He has developed kinetics and molecular models of TRPC4 and TRPM8 channels, new pharmacological modulators of TRPC4 and BK<sub>Ca</sub> channels.</p>