



Curriculum Vitae

Ganna TOLSTANOVA



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Female | Ukraine

♣ Personal webpage: <https://ir.library.knu.ua/entities/person/c3dbc137-1daa-4969-8c28-893e663b080d>
♣ Scopus <https://www.scopus.com/authid/detail.uri?authorId=22942083800>
♣ ODCID ID <https://orcid.org/my-orcid?orcid=0000-0002-5286-5044>

Scientific degree (degree, specialization)	Doctor of Sciences, 03.00.04 - Biochemistry (2011)
Academic rank	Professor, 091 Biology (2019) Doctor of Sciences, 03.00.04 - Biochemistry (2012)
Position	Professor
Department	Physiology & Anatomy
Faculty / institute	ESC "Institute of Biology and Medicine"

EDUCATIONAL DISCIPLINES / SUBJECTS:

In the current year	Human anatomy, MSc, 1 st year, workshop Educational practice in biology, BSc, 2nd year, practice
In the previous periods	BSc, MSc: Fundamentals of molecular pharmacology, Biochemical pharmacology, Molecular-biochemical aspects of pathological conditions, Bioorganic chemistry, Biotechnology, Biochemistry, Medical chemistry, Ecotechnology, Introduction to university studies. PhD: "Project Management and Grant Writing"

EXPERIENCE OF SCIENTIFIC AND SCIENTIFIC-EDUCATIONAL WORK

Period (starting from the last one)	Stage (description)
01.06.2026 - in current	Professor Department of Physiology & Anatomy ESC "Institute of Biology and Medicine" of Taras Shevchenko National University of Kyiv Lectures and practical classes. Research Education
2017 - 2026	Professor Department of Supramolecular Chemistry (part time) ES "Institute of High Technologies", Taras Shevchenko National University of Kyiv https://iht.knu.ua/ Lectures and practical classes. Research Education
2016 - 2017	Associate Professor the Department of Fundamental Medicine (part time) ESC "Institute of Biology and Medicine" of Taras Shevchenko National University of Kyiv Lectures and practical classes. Research Education
2012 - 2015	Associate Professor, the Department of Biochemistry ESC "Institute of Biology" of Taras Shevchenko National University of Kyiv Lectures and practical classes. Research Education
2007 - 2009	Postdoctoral Fellow Department of Pathology, University of California Irvine, USA Research in molecular pathology Research
1999-2012	Engineer → Junior Researcher → Research Associate → Senior Research Associate Research Institute, ESC "Institute of Biology" of Taras Shevchenko National University of Kyiv Research in Experimental Gastroenterology Research

TRAINING

Period (starting from the last one)	Stage (description)
2011	Doctoral thesis: "Biochemical mechanisms of pathogenesis of inflammatory bowel diseases" (scientific consultant Prof. Ostapchenko L.I., Taras Shevchenko National University of Kyiv).
2000 - 2003	PhD student of Taras Shevchenko National University of Kyiv. Candidates of science thesis 03.00.13 Human and Animal Physiology: "Pathways of Histamine Effects on Gastric Secretion" (scientific supervisor Prof. Beregova T.V.).
1995 - 2000	Specialty: "Physiology", qualification: Master of Biology, Physiologist, Biology Teacher. Faculty of Biology, Taras Shevchenko National University of Kyiv.

INTERNSHIP

Period (starting from the last one)	Stage (description)
2026	University Press Publishing for Ukraine: Policy and Practice at Oxford Brooks, UK (19-23 January 2026)
2024	Academic mobility, staff training and research training, The Université de Lorraine, Nancy, France (Erasmus+).
2023	Academic mobility, staff and research training, The Lund University, Lund, Sweden (Erasmus+).
2019	Academic mobility, research training, The MDC for Molecular Medicine, Berlin, Germany (Erasmus+)
2018	Academic mobility, research training, Konstanz University, Germany (Erasmus+)
2016	JRC Innovation Week in Trieste, 26- 30 September 2016, Italy
2016	Study Visit in Ispra Joint Research Center (EU), 6-8 April 2016, Italy
2016	The Information visit on the German research and higher education system on the academic and administrative level sponsored by DAAD, Bonn, Germany
2013	6-month internship under the State Program "100+100+100" Department of Digestive Diseases David Geffen School of Medicine, University of California, Los Angeles, California, USA. https://www.ucla.edu/
2012	UEG Basic Science Course "Epithelial Ion Transport in the GI Tract", University of Szeged, Szeged, Hungary
2005	Training Course on Molecular Biology, Krakow, Poland

PERSONAL SKILLS

Name	Level (description)
Native language	Ukrainian
Foreign language	English B2
Communication competence	Strategic communications and public representation of the institution; facilitation of intersectoral interaction "education - science - business - state"; moderation of professional discussions, conferences and international events; preparation of analytical, expert and presentation materials; team interaction, mentoring and development of professional communities.
Organizational/ management competence	2022–present Founder and Board Member of the NGO "Professional Network of Higher Education and Research Managers of Ukraine" https://www.pnrm.org/ 2021-2026 Vice-Rector for Research of Taras Shevchenko National University of Kyiv 2022-2026 First Deputy Chairman of the Council of Vice-Rectors for Research of the Ministry of Education and Science of Ukraine 2015-2021 Head of the Research Department of Taras Shevchenko National University of Kyiv 2014-2019 Chairman of the Council of Young Scientists of Taras Shevchenko National University of Kyiv
Digital competences	PC user: Microsoft Office, graphic editors, Zoom, Google tools
Professional skills (not listed above)	Supervised 7 PhD students: 1. Beregovy S.M. - Candidate of Biological Sciences, "The role of the transcription factor Egr-1 in the pathogenesis of gastric ulcer", specialty 03.00.04 - biochemistry, 2015. 2. Dovbynychuk T.V. - Candidate of Biological Sciences, "Mechanism of action of cephalosporin antibiotics on the transport of water and ions through the colon epithelium", specialty 03.00.13 - human and animal physiology, 2017. 3. Holota Yu.O. - Candidate of Biological Sciences, "Biochemical markers of the intestinal barrier in the long term after the ceftriaxone administration", specialty 03.00.04 - biochemistry, 2018. 4. Prysyazhnyuk O.I. - Candidate of Biological Sciences, "The role of the peripheral dopaminergic system in the pathogenesis of inflammatory bowel diseases", specialty 03.00.04 - biochemistry, 2018.

	5. Akulenko I. V. - PhD, "The effectiveness of oxalate-degrading bacteria in the prevention of hyperoxaluria", specialty 091 - biology, 2021. 6. Stetska V.O. - PhD, "The role of TRPV4 and TRPM8 ion channels in intestinal secretomotor function during experimental parkinsonism", specialty 091 - biology, 2023. 7. Korbush M.O. - PhD, "Barrier function of the intestine under the action of carbon-containing nanoparticles-air pollutants of natural and anthropogenic origin", specialty 091 - Biology and Biochemistry, 2024. Supervising three PhD students in the field - E1 - Biology and Biochemistry 1. Vladislav Stadnichenko (2nd year) - "Selection and study of new ligands of the binary complex of E3 ligase for the development of PROTAC molecules". Study period 2024-2028. 2. Rodion Korzh (1st year) - "Application of DNA-encoded library technology, high-throughput and virtual screening in the development of new drugs to treat inflammatory bowel diseases". Study period 2025-2029. 3. Oleksiy Yevdokimenko (1st year) - "Microbiota as a modulator of the gut-brain axis under the harmful effects of carbon-containing smoke particles and heavy metals". Study period 2025-2029.
Areas of professional interest	Molecular mechanisms of the endothelial and epithelial barriers of the intestine under the influence of air pollution, disruption of the microbiota composition and pro-inflammatory agents effects. Metabolic activity of the microbiota as a factor of interaction along the "gut-brain", "gut-kidney" axis. Molecular mechanisms of motor and secretory functions of the intestine during extraintestinal pathologies. Study of the pharmacological effect of potential drugs on various cellular and animal models.

ADDITIONAL INFORMATION

Publications	Publications: Author of over 150 scientific and scientific-methodological works. Hirsch index =18. 1. Temnik, M., Rudyk, M., Balakin, A. Gurin, Dovbynychuk T., R. Byshovets, Dzubenko N., Dovhyi R., Serhiichuk T., Tolstanova G., Skivka L. Isotopically enriched ⁶⁴Zn-aspartate attenuates systemic inflammation and gut dysbiosis in an LPS-induced rat model of Parkinson's disease. Sci Rep 16, 10907 (2026). https://doi.org/10.1038/s41598-026-45640-9 Q1 - Scientific Reports 22. Dziubenko N, Byelinska I, Dovbynychuk T, Ishchuk A, Velmyk V, Korbush M, Paliienko K, Kalynovska L, Krisanova N, Pozdnyakova N, Borisova T, Tolstanova G. Mutual oral administration of wood/plastic smoke PM and heavy metals Pb²⁺/Cd²⁺: General toxicity effects and ACE2 expression in rats. Environ Toxicol Pharmacol. 2026 Jan;121:104881. doi: 10.1016/j.etap.2025.104881. Q1 - Environmental Toxicology and Pharmacology 3. Temnik M., Rudyk M., Balakin A., S. Gurin, Dovbynychuk T., R. Byshovets, Dzubenko N., Tolstanova G., Skivka L. Anti-inflammatory effects of 64Zn-aspartate is accompanied by cognitive improvements in rats with Aβ1-40-induced alzheimer disease. Scientific Reports. 2025/4/24. 15:14272. https://doi.org/10.1038/s41598-025-97830-6 Q1 - https://www.scimagojr.com/journalsearch.php?q=21100200805&tip=sid&clean=0 7. Nefodova A., Rudyk M., Dovhyi R., Dovbynychuk T., Dzubenko N., Tolstanova G., Skivka L. Systemic inflammation in Aβ1-40-induced Alzheimer's disease model: New translational opportunities. Brain Research. 2024/8/15. V. 1837, 148960. Q2 https://doi.org/10.1016/j.brainres.2024.148960 Q2 - https://www.scimagojr.com/journalsearch.php?q=14346&tip=sid&clean=0 8. Stepanova, N.; Tolstanova, G.; Aleksandrova, I.; Korol, L.; Dovbynychuk, T.; Driianska, V.; Savchenko, S. Gut Microbiota's Oxalate-Degrading Activity and Its Implications on Cardiovascular Health in Patients with Kidney Failure: A Pilot Prospective Study. Medicina 2023, 59, 2189. https://doi.org/10.3390/medicina59122189 4. Dorofeyev, A., Dorofeyeva, A., Borysov, A. Tolstanova G., Borysova T. Gastrointestinal health: changes of intestinal mucosa and microbiota in patients with ulcerative colitis and irritable bowel syndrome from PM2.5-polluted regions of Ukraine. Environ Sci Pollut Res 30, 7312-7324 (2023). https://doi.org/10.1007/s11356-022-22710-9 Q1 - https://www.scimagojr.com/journalsearch.php?q=23918&tip=sid&clean=0 5. Oliynyk Z, Rudyk M, Dovbynychuk T, Dzubenko N, Tolstanova G, Skivka L. Inflammatory hallmarks in 6-OHDA- and LPS-induced Parkinson's disease in rats. Brain Behav Immun Health. 2023 Apr 5 ;30:100616. DOI: 10.1016/j.bbih.2023.100616 Q1 - https://www.scimagojr.com/journalsearch.php?q=21101094829&tip=sid&clean=0 6. Paliienko K, Korbush M, Krisanova N, Pozdnyakova N, Borysov A, Tarasenko A, Pastukhov A, Dudarenko M, Kalynovska L, Grytsaenko V, Garmanchuk L, Dovbynychuk T, Tolstanova G, Borisova T. Similar in vitro response of rat brain nerve terminals, colon preparations and COLO 205 cells to smoke particulate matter from different types of wood. Neurotoxicology. 2022 Dec;93:244-256. doi: 10.1016/j.neuro.2022.10.009
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Books IP documents	Q1 - https://www.scimagojr.com/journalsearch.php?q=18073&tip=sid&clean=0 Q2 - https://www.scimagojr.com/journalsearch.php?q=51878&tip=sid&clean=0 9. Pozdnyakova N, Krisanova N, Pastukhov A, Tarasenko A, Dudarenko M, Chernykh A, Pashenko A, Ryabukhin S, Tolstanova G, Volochnyuk D, Borisova T. <u>Neuromodulation by selective angiotensin-converting enzyme 2 inhibitors</u>. Neuroscience. 2022 Aug 21;498:155-173. doi: 10.1016/j.neuroscience.2022.07.003. Q2 https://www.scimagojr.com/journalsearch.php?q=18042&tip=sid&clean=0#google_vignette 1. Tolstanova, G., Akulenko, I., Serhiichuk, T., Dovbynychuk, T., Stepanova, N. (2023). Pro- Pre- and Synbiotic Supplementation and Oxalate Homeostasis in 3 PM Context: Focus on Microbiota Oxalate-Degrading Activity. In: Boyko, N., Golubnitschaja, O. (eds) Microbiome in 3P Medicine Strategies. Advances in Predictive, Preventive and Personalised Medicine, vol 16. Springer, Cham. https://doi.org/10.1007/978-3-031-19564-8_12 2. 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 3 "Inflammation and Its mediators" (pp. 41-60), Chapter 6 "Versatile Gut Barrier: One Barrier - Many Diseases" (pp. 107-142). DOI: https://doi.org/10.52305/KGOX9170 1. Patent for invention No. 122424 of Ukraine. No. a201806195 "Method for determining the oxalate-degrading activity of bacteria". Authors: Zaporozhets O., Tolstanova G., Paustovska A., Akulenko I., Serhiychuk T., Stepanova N. Owner - Taras Shevchenko National University of Kyiv. Published 10.11.2020, Bull. No. 21. 4s. 2. Patent for utility model No. 146818; Patent issue date: 17.03.2021 "Automated decision-making complex for determining the readiness for application of technologies and samples for the manufacture of weapons and military equipment". Authors: Pampukha I.V., Karpenko A.O., Tolstanova G.M., Lushchik S.V., Loza V.M., Okhramovych M.M., Savran V.O., Shevchenko V.V., Tolok I.V., Popkov B.O., Dobrovolsky V.B.
Outreach activity	1. Ганна Толстанова, Антибіотикотерапія у XXI сторіччі Sciences.in.ua 1.18K subscribers https://www.youtube.com/watch?v=FDpJJusbcyc 2. Просто про IP та інновації - Ганна Толстанова про роль університетів у розвитку інновацій UANIPIO (IP Office) 932 subscribers https://www.youtube.com/watch?v=xOAYWBaWxXE 3. Ганна Толстанова, експерт Українського Фонду Стартапів 3.07K subscribers https://www.youtube.com/watch?v=IBYWCKO5KNM
Projects and Grants	PI or Co-PI: 1. PI - Collaborative grant with Institute for Nuclear Research NASU, 'The condition of the intestinal barrier and metabolism in the red-tailed weasel under conditions of radioisotope contamination: a field experimental study in the exclusion zone', funded by the Department of Targeted Training of the TSNUK at the NASU, 2026-2027. 2. PI grant «First -in- kind anticancer therapy combining light-controllable cytotoxic peptides and dendritic cell-based immunotherapy (LIGHT-boosted THERapy - LIGHTHER)» (lead partner - VUMC, Netherlands), funded under HORIZON-MSCA-2024-SE GRANT# 01234442, 2026 - 2030. 3. PI grant "INTREPID-HEI - International Capacity Building in Innovation, Transfer and Entrepreneurship with focus on Shared Expertise in Higher Education Institutions"(Lead partner: Ostbayerische Technische Hochschule Regensburg (OTH Regensburg), Regensburg University of Applied Sciences) funded under EIT-HEI Initiative - Urban Mobility , 2022-2024. 4. Co-PI grant State Foundation of Fundamental Research of Ukraine "Glutamate/GABA signalling in bidirectional Gut-Brain communication system: a focus on harmful effects of air pollution carbon-containing nanoparticles" (Lead partner: Institute of Biochemistry named after O. Palladin NASU) , 2020 -2023. 5. PI grant "Development of the KNU innovation ecosystem for the creation of advanced optical materials", funded by the EU's external assistance instrument to fulfill Ukraine's commitments in the EU Framework Programme for Research and Innovation "Horizon 2020", 2024-2025. 6. Co-PI DAAD grant "Support for the internationalisation of Ukrainian higher education institutions - continuing education programmes for administrators at Ukrainian

	higher education institutions in education and academic management 2022-2023" "(Lead partner: Leibniz University Hannover (LUH) Hannover, Germany). 7. PI- Collaborative grant supported by the MEVLANA EXCHANGE PROGRAM with Anadolu University (Turkey), for the project "Evaluation of immunological effects of sorbicillin like compounds in vitro / in vivo inflammatory bowel disease model", 2018-2019. 8. PI- Collaborative grant with the State Institution "Institute of Food Biotechnology and Genomics" NASU supported by the Department of Targeted Training of the TSNUK at the NASU, project "Development of nanobiotechnological approaches for obtaining cadmium sulfide quantum dots and study of their biological activity", 2014-2016. 9. PI- Grant of the MES of Ukraine "Dopaminergic system in the pathogenesis of inflammatory bowel diseases: clinical and experimental studies", 2015. 10. PI- Outreach Grant British Physiological Society "Brain games", 2014. 11. PI - CRDF Grant The role of dopamine and D2-dopamine receptors in the pathogenesis of inflammatory bowel disease in view of its role in VEGFNP-induced permeability of the vessels of the colon", 2009. 12. PI - Grant of the President of Ukraine to support scientific research of young scientists "The development of approaches to treat the IBD on the uncovering the new pathogenetic mechanisms", Agreement №21/2009, 2009. <i>Co-investigator in grants for last 10 years:</i> 1. Co-investigator - Grant implementer "DAISI Ukraine - Development and Integration of Mobile Mental Health Services in Ukraine", funded by the National Institute for Health Research of the United Kingdom within the framework of the program "Units and Groups of Global Health Research" (NIHR155974) 2025-2028. 2. Expert implementer of the project "Polish-Ukrainian Cooperation of Interested Institutions Representing Rectors to Improve University Activities", funded by the Polish Government, 2025. 3. Co-investigator - Grant of the MES of Ukraine "Transport of ions and oxalates as a key factor in chronic kidney disease and associated pathologies", 2022-2024 4. Co-investigator - Grant of the MES of Ukraine "Molecular and cellular mechanisms of TRP canalopathies", 2019-2021 5. Co-investigator DAAD grant "OER with Ukraine" (Lead partner: Leibniz University Hannover (LUH) Hannover, Germany) 2022 p. 6. Co-investigator commissioned by Vector Vitale LLC, a legal entity established under the laws of the USA, on the topic "Comparative assessment of the effect of the drug 64Znacn on cognitive symptomatology in rats with different models of Alzheimer's disease induced by infusion of a mixture of beta-amyloid peptides: a pilot study", 09.2019-02.2020. 7. Co-investigator commissioned by Vector Vitale LLC, a legal entity established under the laws of the USA, on the topic "Effect of the drug 64Zn-acn and 64Zn-acn containing 50% 32+85Rb on indicators of local and systemic immune reactivity, behavioral and motor functions of rats with LPS-induced experimental parkinsonism", 10.2018-02.2019
Membership in professional organizations	2009 - present - Member of the Ukrainian Biochemical Society 2008 - present - Membership in the British Physiological Society (Physoc representative at the TSNUK). 2019 - present Member of the Specialized Academic Council for Awarding the Scientific Degree of Doctor of Sciences (Candidate of Sciences) D 26.240.01, Institute of Biochemistry named after Academician O.V. Palladin of the National Academy of Sciences.
Member of Editorial Board	1. Member of Editorial Board - Ukrainian Biochemical Journal (Scopus) http://ukrbiochemjournal.org/editorial 2. Associate Editor for Frontiers in Pharmacology. Gastrointestinal and Hepatic Pharmacology (Scopus) https://loop.frontiersin.org/people/264602/editorial 3. Member of Editorial Board Medical and Clinical Chemistry (Index Copernicus ICV) https://ojs.tdmu.edu.ua/index.php/MCC
Honors and Awards	2025 - «Excellence in Education» Acknowledgment of the Ministry of Education and Science of Ukraine; 2023 - Laureate of the Prize of the National Academy of Sciences of Ukraine "For the Popularization of Science" 2023 - Diploma "For Scientific Achievements at Taras Shevchenko National University of Kyiv"; 2021 - Acknowledgment of the Ministry of Education and Science of Ukraine;

	2013 - Winner of the State Prize of Ukraine in Science and Technology. 2002 - Scholarship of the Cabinet of Ministers of Ukraine for students of higher educational institutions
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