Hanna Fotina

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Professional Summary

Dedicated Veterinary Scientist and Researcher with over 20 years of experience in veterinary medicine, veterinary ecology, toxicology, animal welfare (animal rights, animal protection), biosafety, complemented by a deep interest in environmental impacts on wildlife, including both avian and other species. I bring expertise in animal health, clinical toxicology, and ecology, with a demonstrated ability to conduct field research, manage large datasets, and supervise students and research assistants. Additionally, I have 20 years of teaching experience as a lecturer at Sumy National Agrarian University, where I have mentored and educated students in veterinary science, fostering the next generation of professionals in the field.

Main research works: "Effective toxicological evaluation and development of chemotherapeutic agents in poultry“, „Monitoring of poultry diseases“, „Issues of animal Welfare, Ethics and laws in case of Ukraine".

Education: October 2019 – Professor, Ministry of Education and Science of Ukraine, Kiev, Ukraine

2015 – 2017 – MASTER OF LAW – SNAU, Faculty of Law.

September 2015 – Doctor of Veterinary Sciences, Lviv National University of Veterinary Medicine, Ukraine

Thesis: Pharmaco-toxicological and clinical assessment of chemotherapeutic agents for rotation schemes in poultry.

October 2010 – Associate Professor, Ministry of Education and Science, Kiev, Ukraine

April 2009 – PhD in Veterinary Medicine, Lviv National University of Veterinary Medicine and Biotechnology, Ukraine. *Thesis*: Toxicological estimation and disinfection efficiency of “Brovadez - plus”

June 2003 – Specialist of Veterinary Medicine, SNAU, Ukraine

Professional Appointments: 2022– present: Associated Scientist – Laboratory of Molecular Biology of Ticks, Institute of Parasitology, Biological Center CAS (Czech Republic)

***Research Focus*:** molecular descriptions of proteins that are keys for the successful blood-feeding of ticks, testing acaricidal active substances using artificial membranes for tick feeding (mainly *Ixodes ricinus, Dermanyssus gallinae).*

2017 – present: Professor – Department of veterinary and sanitary inspection, microbiology, hygiene and pathological anatomy, SNAU, *Courses Taught*: Veterinary Ecology, Veterinary Pharmacology, Veterinary Zoology, Professional Ethics.

2022 – 2024: Forensic Expert – Sumy Branch of the Kharkiv Research Institute of Forensic Examinations, Ukraine. *Focus on*: Animal Injury Assessment and Investigation, Animal Cruelty and Abuse Investigations.

2020 – Present on-line Veterinary Pharmacology Lecturer, Henan College, China.

2005 – present: Lecturer – Veterinary Department, SNAU, Ukraine (Ukrainian, English lang).

Research Focus & Experience: As a Doctor of Veterinary Sciences and Professor at Sumy National Agrarian University, I specialize in veterinary toxicology, poultry health, animal welfare, and the environmental impacts on animal health. My research spans basic and applied sciences, focusing on chemotherapeutic agent development and poultry disease monitoring. I am committed to animal protection and rights, advocating for ethical treatment and sustainable practices in agriculture and clinical settings.

As a One Health Specialist, I integrate human, animal, and environmental health in my work, studying the impact of environmental and ecological factors on zoonotic diseases, antimicrobial resistance, and public health. My research also extends to wildlife, particularly how environmental stressors like toxins and climate change affect species.

I serve as Scientific Adviser for Ltd “Brovafarma,” conducting toxicological evaluations of veterinary drugs for poultry. At the Institute of Parasitology, I focus on tick physiology, using artificial membrane feeding techniques to study ticks' biology and test acaricides’ efficacy.

As a Lecturer and Professor, I teach Veterinary Ecology, Pharmacology, Zoology, and Ethics, providing students with a deep understanding of animal-environment interactions, environmental health impacts, and professional veterinary ethics.

Full list of publications: Monograph:

1. *Bacterial and Fungal Zoonoses* / L. E. Korniienko, I. F. Makovska, A. P. Herilovych, H. Fotina, et al.: scientific monograph – Edited by L. E. Korniienko. – Kyiv: State Research Institute for Laboratory Diagnostics and Veterinary Expertise (DNDILDVSE), 2025. – 815 pages.

2. Fotina, T., **Fotina, H.*** (2021): Environmental Protection and Animal Advocacy in Ukraine. Climate Crisis and Sustainable Creaturely Care. Edited by Christina Nellist. Cambridge Scholars Publishing. Chapter 5, 67-190.

3. Berezovsky, A., German, V., Fotina, T., **Fotina H.** (2020): Poultry Diseases (2nd Edition), Kyiv, 424 pp.

4. Fotina, T., **Fotina, H.** (2018): Parasito-Cenoses and Pathological Processes They Cause in Poultry. Scientific Publication. Dnipro: Zhurfond, 112 pp.

5. Berezovsky, A., German, V., Fotina, T., **Fotina H.** (2012): Poultry Diseases, Kyiv: DIA, 328 pp.

6. Berezovsky, A., Fotina, T., **Fotina, H.** (2010): Modern Chemotherapeutic Agents in Poultry Farming Technology. Kyiv. 72 pp.

7. Berezovsky, A., Fotina, T., **Fotina, H.,** Titova, T. (2010): General and Veterinary Ecology. Kyiv, 2010. 400 pp.

Publication with peer review process

1. Xu, X., Xu, P., Si, Z., Miao, R., Zhang, Y., Chen, L., Fotina, H., Li, Y. (2024). Evaluation of the Utilization Value of Different Germplasm of *Lonicera japonica* Thunb Branches and Leaves Based on Phenolic Acid Components. *Science and Technology of Food Industry, 45*(19), 247–255. https://doi.org/10.13386/j.issn1002-0306.2023100033
2. Zhao, X., Wang, L., Zhu, L., Fotina, H. (2024). Oral Administration of the Antimicrobial Peptide Mastoparan X Alleviates Enterohemorrhagic *Escherichia coli*–Induced Intestinal Inflammation and Regulates the Gut Microbiota. *Probiotics and Antimicrobial Proteins, 16*(1), 138–151.
3. Shkromada, O., Fotina, T., Fotina, H., Sergeychik, T., Kaliuzhna, T. (2024). Effectiveness of probiotics in growing broiler chickens. *Scientific Horizons, 27*(1), 32–40.
4. Zhu, C., Yilin, B., Xiaojing, X., Man, Z., Xilong, W., Yundi, W., Yueyu, B., Fotina, H., Shanqin, L., Gaiping, Z., Jianhe, H. (2022). Effects of the Antimicrobial Peptide Mastoparan X on the Performance, Permeability, and Microbiota Populations of Broiler Chickens. *Animals, 12*(24), 3462.
5. Wang, Y., Wang, X., Wang, Sh., Fotina, H., Wang, Z. (2022). A Novel Lateral Flow Immunochromatographic Assay for Rapid and Simultaneous Detection of Aflatoxin B1 and Zearalenone in Food and Feed Samples Based on Highly Sensitive and Specific Monoclonal Antibodies. *Toxins, 14*(9), 615.
6. Zhu, C., Zhao, Y., Zhao, X., Liu, S., Xia, X., Zhang, S., Fotina, H., Wang, L., Zhang, X. (2022). The Antimicrobial Peptide MPX Can Kill *Staphylococcus aureus*, Reduce Biofilm Formation, and Effectively Treat Bacterial Skin Infections in Mice. *Frontiers in Veterinary Science, 9*, 819921.
7. Wang, Y., Wang, X., Wang, Sh., Fotina, H., Ziliang, W. (2022). Development of a Highly Sensitive and Specific Monoclonal Antibody Based on Indirect Competitive Enzyme-Linked Immunosorbent Assay for the Determination of Zearalenone in Food and Feed Samples. *Toxins, 14*(3), 220.
8. Zhao, X., Fotina, H., Fotina, T., Hu, J., Wang, L. (2022). The effect of oral administration of the antibacterial peptide MPX on intestinal inflammation of mice in experimental infection with *Escherichia coli* strain O157:H7. *Scientific Horizons, 25*(2), 9–15.
9. Zhao, X., Wang, L., Zhu, C., Xia, X., Zhang, S., Wang, Y., Zhang, H., Xu, Y., Chen, S., Jiang, J., Liu, S., Wu, Y., Fotina, H., Hu, J. (2021). The Antimicrobial Peptide Mastoparan X Protects Against *Enterohemorrhagic Escherichia coli* O157:H7 Infection, Inhibits Inflammation, and Enhances the Intestinal Epithelial Barrier. *Frontiers in Microbiology, 12*, 644887.
10. Wang, Y., Wang, X., Zhang, H., Fotina, H., Jiang, J. (2021). Preparation and Characterization of Monoclonal Antibodies with High Affinity and Broad Class Specificity against Zearalenone and Its Major Metabolites. *Toxins (Basel), 13*(6), 383.
11. Wang, Y., Wang, X., Zhang, H., Jiang, J., Fotina, H. (2021). Synthesis of Zearalenone Immunogen and Comparative Analysis of Antibody Characteristics. *International Journal of Analytical Chemistry, 7109383*.
12. Duan, M., Wei, X., Cheng, Z., Liu, D., Fotina, H., Xia, X., Hu, J. (2020). Involvement of eIF2α in halofuginone-driven inhibition of TGF-β1-induced EMT. *Journal of Biosciences, 45*(1), 71, 1–11.
13. Wang, Y., Jiang, J., Fotina, H., Zhang, H., Chen, J. (2020). Advances in Antibody Preparation Techniques for Immunoassays of Total Aflatoxin in Food. *Molecules (Basel, Switzerland), 25*(18), 4113.

14. Wang, L., Zhao, X., Zhu, C., Zhao, Y., Liu, S., Xia, X., Liu, X., Zhang, H., Xu, Y., Hang, B., Sun, Y., Chen, S., Jiang, J., Bai, Y., Zhang, G., Lei, L., Richard, L.P., Fotina, H., Hu, J. (2020). The antimicrobial peptide MPX kills *Actinobacillus pleuropneumoniae* and reduces its pathogenicity in mice. *Veterinary Microbiology, 243*, 108634.

15. Vashchyk, Y., Shcherbyna, R., Parchenko, V., Bushueva, İ., Gutyj, B., Fotina, H., Fotina, T., Stronskyi, Y. (2020). Histological study of a corrective influence of a compound potassium 2-(4-amino-5-(morpholinomethyl)-4H-1,2,4-triazol-3-yl)thio)acetate (pkr-173) on the state of chicken's liver under infection by *Pseudomonas aeruginosa*. *Journal of Faculty of Pharmacy of Ankara University, 44*(1), 1–17.

16. Wang, L., Zhao, X., Xia, X., Zhu, C., Qin, W., Xu, Y., Hang, B., Sun, Y., Chen, S., Zhang, H., Jiang, J., Hu, J., Fotina, H., Zhang, G. (2019). Antimicrobial Peptide JH-3 Effectively Kills *Salmonella enterica* Serovar Typhimurium Strain CVCC541 and Reduces Its Pathogenicity in Mice. *Probiotics and Antimicrobial Proteins, 11*(4), 1379–1390.

17. Zapara, S., Fotina, H., Klochko, A., Fotina, T., Yatsenko, I. (2019). Revisiting legal understanding of wildlife as a sustainable value: The case of Ukraine. *Journal of Environmental Management and Tourism, 10*(1), 14–21.

Ukrainian scientific journal included in category „B":

1. Kaliuzhna T., **Fotina H.*** (2023): Study of Aspir-35 toxicity. In: *Scientific Messenger of LNU of Veterinary Medicine and Biotechnologies. Series: Veterinary Sciences*, *25*(111), 114-118.

2. Wang X., Xu Y., **Fotina H.*** (2020): Effects of probiotic Clostridium Butyrate on Performance and Immunocompetence and Digestive Function of poultry. In: *Ukrainian Journal of Veterinary and Agricultural Sciences*, *3*(1), 27-33.

3. **Fotina H.,** Klischova Z. (2016): The sensitivity of the pathogens of poultry's bacterial diseases to antibiotics. In: *Scientific Messenger of LNU of Veterinary Medicine and Biotechnologies. Series: Veterinary Sciences*, *18*(71), 182-185.

Conference Thesis Titles:

1. **Fotina H.** (2004): Microbiology Conference Thesis. Monitoring of Escherichiosis Pathogens, 22nd World's Poultry Congress, Istanbul, 178-180.

2. **Fotina H.** (2006): Preventive Measures for Associated Bacterial Diseases in Poultry. In: Monitoring the Spread and Prevention of Particularly Dangerous Animal and Poultry Diseases, Collection of Conference Materials, Samarkand, 2006, 323-325.

3. Berezovskiy A., **Fotina H.** (2007): Improvement of Prevention Methods for Associated Bacterial Diseases in Poultry. In: Proceedings of the Georgian Academy of Agricultural Sciences. Tbilisi, 20, 246-248.

4. **Fotina H.** (2008): New Domestic Disinfectant for Poultry Farming. Proceeding of the International Scientific and Practical Conference of Young Scientists, Postgraduates, and Doctors, May 15-16, 2008, Bila Tserkva, 39–40.

5. **Fotina H.** (2009): Environmentally Safe Disinfection in Poultry Farming – The Key to Obtaining Quality Products. In: Poultry Farming: Interdepartmental Thematic Scientific Collection, Kharkiv, 2009, 64, part 2, 166–173.

6. **Fotina H.** (2011): Effect of Water-Soluble Antistress Premix Feed Food Magic Antistress on the Amino Acid Composition of the Blood of Laying Hens. Actual Problems of Modern Poultry Farming: Collection of Scientific Papers of the UAP Conference, Kharkiv, 2011. 307–312.

7. Berezovskiy A., **Fotina H.*** (2011): Determination of the Sensitivity of Bacterial Flora in Poultry Farms to the Active Components of Modern Antimicrobial Agents. Poultry Farming: Interdepartmental Thematic Scientific Collection. Kharkiv, 2011, 67, 22–27.

8. **Fotina H.** (2011): Program for Preventing Bacterial Diseases in Poultry and Producing Eco-Friendly Poultry Products. Collection of Scientific Papers from the International Poultry Conference, Alushta, 2011, 13-18.

9. **Fotina H.,*** Fotin A., Surai P. (2012): Influence of the Preparation "Feed Food Magic Antistress Mix" on the Natural Resistance of Ducklings. In: Bulletin of Sumy National Agrarian University. Ser. "Vet. Medicine", 7(31), 58–61.

10. Berezovskiy A., **Fotina H.*** (2012): Effect of the Preparation "AvesstimTM" on the Resistance of Broiler Chickens. In: Scientific and Technical Bulletin of the Institute of Animal Biology and DNDKI Veterinary Preparations and Feed Additives, 13, 378–381.

11. Berezovskiy A., **Fotina H.**, Kovalenko I (2012): Determination of Protective Capacity of the "Microstimulin" Preparation in Experimental Infectious Synovitis in Chicks. In: "Current Problems of Veterinary Medicine in Ukraine": All-Ukrainian Scientific and Practical Conference, September 19, 2012, Poltava, 3–4.

12. Berezovskiy A., **Fotina H.** (2012): Principles of Creating Complex and Combined Antibacterial Preparations. In: Innovative Developments and Their Adoption in Industrial Poultry Farming: Collection of International Conference Papers of UAP, Sergiev Posad, 2012, 510–512.

13. Dvorska Y., **Fotina H.** (2012): Program for Reducing Salmonella in Poultry Products. In: Scientific Support of Agro-Industrial Production: International Scientific and Practical Collection, Kursk, 2012, Part 1, 14–17.

14. Berezovskiy A., **Fotina H.**, Kovalenko I. (2012): Nanoaquchelates of Micronutrients as an Alternative to Antibiotics in the System of Preventing Bacterial Diseases in Poultry. In: Poultry Farming: Interdepartmental Thematic Scientific Collection, Kharkiv, 2012, 68. 22–28.

15. Berezovskiy A., **Fotina H.**, Olefir O. (2013): Industrial Poultry Farming: The Problem of Stress and Its Solutions. In: XI International Congress of Veterinary Medicine Specialists, October 3-4, 2013, Kyiv, 46–47.

16. Fotina T., **Fotina H.*** (2014): Effectiveness of Using Ecological Means in Poultry Production. In: Problems of Zootechnics and Veterinary Medicine: Collection of Scientific Papers of Kharkiv State Zooveterinary Academy, 3(45), 67-81.

17. **Fotina H.,** Surai P. (2014): Effect of a Water-Soluble Antistress Composition on Broiler Chickens. In: XIV European Poultry Conference, June 23-27, 2014, Norway, 149.

18. Fotina T., **Fotina H.*** (2014): Microflora of Poultry Houses. In: Poultry Farming, Interdepartmental Thematic Scientific Collection, Kharkiv, 2014, 6(36), 84–86.

19. Kaluzna T., **Fotina H.** (2018): Characteristics of Immunomodulators. Proceedings of the Scientific and Practical Conference of Teachers, Postgraduate Students, and Students of Sumy National Agrarian University, November 12-16, 2018, Sumy, 316.

20. Fotina T., Demyanenko D., Fotina H., Vashchyk Y. (2023): Bacterial Biosecurity of Food Eggs. Scientific and Methodological Center of Higher Education, Kyiv, 2023.

21. **Fotina H.,** Perner J. (2023): Using Lipids to Develop an Artificial Diet: As a Method for Studying the Physiology of Ixodes ricinus. State scientific and control institute of biotechnology and strains of microorganisms. Proceedings of the International Scientific and Practical Conference "Biotechnology and its role in ensuring the health of humans and animals", December 20, 2023, Kyiv, 151-152.

22. **Fotina H.,** Berezovsky A., Fotin O. (2023): The Problem of Antibiotic Resistance in Poultry Farming: Who Will Prevail? Proceedings of Veterinary Medicine Conferences, Scientific and Methodological Center of Higher Education. Kyiv, 2023, 177.

23. **Fotina H.,** Perner J. (2024): Utilizing lipids to define an artificial diet: a tool for investigating the physiology of ixodes ricinus. In: Collection of Materials from the All-Ukrainian Scientific and Practical Conference of Scientific and Pedagogical Workers and Young Scientists "Current issues in forensic veterinary examination: realities and prospects".Odessa, 156-159.

24. **Fotina H.** (2024): Modern achievements of clinical laboratory medicine in the diagnosis of animal diseases. Ministry of health of Ukraine, National university of pharmacy department of clinical laboratory diagnostics department of biological chemistry and veterinary medicine. IV scientific and practical international distance conference «Modern achievements and prospects of clinical laboratory medicine in the diagnosis of human and animal diseases», March 28, 2024, Kharkiv.

PEER RECOGNITION: Awards and Honors 2007, 2008, 2009 Awarded prize places in competitions for best advanced studies on scientific developments by Alltech Company.

2008, 2009, 2023 Honorary Diploma from the Ministry of Education and Science of Ukraine.

2009 President's Award Winner, recognized as a Laureate of the President's Award for Young Scientists of Ukraine.

International training: 2003-2004: Scottish Agricultural College: Studied various biochemical techniques under the supervision of Professor Peter Surai, PhD, DSc, Professor of Nutritional Biochemistry, Scottish Agricultural College, UK

2013, 2016, 2018, 2020 – one week International Training on Diagnostic of Foodborne Diseases: R-Biopharm, Kyiv, Ukraine.

2018, 2023- Speaker at the Summer School on "Animal Ethics": Oxford, United Kingdom.

Additional Activities: 2007 Member of the Ukrainian Association of Veterinary Medicine Professionals and the World Poultry Science Association; 2018 Member of the British Ecological Society; 2023 Member of the Ukrainian Biochemical Society. 2019 Editorial Board Member, Journal of the Sumy National Agrarian University. From 2019 Member of specialized scientific councils for the defense of doctoral theses. From 2022 Scholar of the Fellowship for Scientists at Risk from the Academy of Sciences of the Czech Republic.

Languages: Ukrainian: Native**, English**: B2 (Advanced)**, Czech**: A2 (Beginner)