Ministry of Education and Science of Ukraine
Sumy National Agrarian University
Faculty of Veterinary Medicine
Department of Veterinary and Sanitary Inspection, Microbiology, Hygiene and Pathological Anatomy

MODULE SYLLABUS

ОК 37 Veterinary and sanitary examination of primary processing of animals and slaughter products

Implemented within the educational program 21 VETERINARY MEDICINE
in specialty 211 VETERINARY MEDICINE

Level of higher education: the second master's level of higher education

Sumy-– 2026

Author: **Fotina T.I., doctor of vet. science, Professor**

Module syllabus agreed at the Department of Veterinary and Sanitary Inspection, Microbiology, Hygiene and Pathological Anatomy	protocol dated 2. 06.2026 № 15
	The Head of Chair R.V. Petrov

Agreed:

Guarantor of the educational program _____ Oleksandr CHEKAN

Dean of the faculty,
where educational programs implemented _____ Lyudmila NAGORNA

Syllabus review (attached) is provided by: _____
_____ (_____)

Representative of the Department of Education Quality assurance,
licensing and accreditation _____
(N. Baranik)

Registered in electronic data base 22.06 2026

Syllabus review data:

The academic year in which changes are made	The Academic program attachment number with changes description	Changes revised and approved		
		Minutes No and date of the department meeting	Head of Department	Guarantor of the Academic program

1. MODULE OVERVIEW

	Name OK	Veterinary and Sanitary Inspection of Livestock Products, Aquatic Organisms, Honey, and Plant Products			
2.	Faculty / department	Faculty of Veterinary Medicine			
3.	Type (compulsory or optional)	compulsory			
4.	Program(s) to which module is attached (to be filled in for compulsory types)	Veterinary medicine 211			
5.	Module can be suggested for (to be filled in for optional types)	Veterinary medicine 211 The second master's level of higher education			
6.	Level of the National Qualifications Framework	7			
7.	Semester and duration of study	12 rd semester, 15 weeks			
8.	ECTS credits number	5			
9.	Total workload and time allotment	Contact work (classes)			Individual work
		Lectures	Practical / seminar	Laboratory	
10.	3d semester	12		26	52
11.	Language of instruction	English			
12.	Module leader	Fotina Tetiana			
1 1.1	Contact Information	Sumy NAU, Faculty of Department of Veterinary and Sanitary Inspection, Microbiology, Hygiene and Pathological Anatomy. Room. 65 a tif_ua @ meta.ua			
13.	General description of the educational component	VETERINARY SANITARY EXAMINATION provides Ability and willingness to conduct veterinary and sanitary assessment and control of production of safe products animal husbandry, beekeeping and aquaculture, knowledge of the rules of transportation goods controlled by the veterinary service, "the ability and readiness organize and conduct expert assessment and control of technological processes and operations for the processing of animal and vegetable raw materials origin, buildings and structures for keeping animals " "The ability and willingness to organize and control technological processes for production, processing, storage, transportation and sale of products of animal origin ".			
14.	The purpose of the educational component	formation of future specialists with deep theoretical knowledge how Conduct a pre-slaughter veterinary examination of animals and birds. Conduct post-mortem veterinary and sanitary			

		inspection of carcasses and internal organs of animals and birds. Take samples, preserve material, arrange and send to the veterinary laboratory for physical and chemical, bacteriological, virological, mycological, toxicological and radiometric research. Prepare smears-prints from samples, materials sent for bacteriological research and staining them by various methods. Conduct veterinary and sanitary examination livestock, beekeeping and aquatic products and give reasoned conclusion about their quality and biological safety.
15.	Prerequisites for studying OK, the relationship with other educational components of OP	1. The educational component is based on such OK as "Animal Genetics and Breeding", "Bioethics, Biosafety, Biosecurity and Ecology", "Normal and Pathological Physiology of Animals", "Parazitology". 2. The educational component is the basis for such OK as " Veterinary hygiene and sanitation of animals ", "Clinical and laboratory diagnosis of animal diseases", "Veterinary virusology", "Organization and economics of veterinary affairs", " Veterinary international and national legislation". 3. The main component is incompatible (does not have)
16.	The policy of academic integrity	• attending classes. In case of skipping classes without good reason, the student must hand over to the teacher thematic situational tasks, • access to higher education for people with special needs. Applicants for higher education with special needs must inform the teacher of the discipline in advance. At the request of the survey, the acceptance of tests and presentations is carried out individually, in the time allotted for consultations (according to this syllabus), in the laboratory or online; • academic activity. Answers to situational tasks and questions of the thematic survey depend on the level of knowledge of the student and are carried out at his request. • laboratory classes. The use of a mobile phone, tablet or other mobile devices during the lesson (except as provided in the curriculum and guidelines of the teacher) is prohibited. Prevention of academic plagiarism. Write-offs and plagiarism are not allowed; in case of dishonesty the work is not credited. Plagiarism check algorithm systems are also tools for counteracting violations of academic integrity . In case of violations, the response is in accordance with the regulations on the academic integrity of participants in the educational process in Sumy NAU (https://snau.edu.ua/viddil-zabezpechennya-yakosti-osviti/zabezpechennya-yakosti-osviti/akademichna-dobrochesnist/). If a violation of academic integrity is detected, the completed task is not credited and is sent for re-execution. Formation of skills of academic writing and thinking. Recommendations for making presentations. The tasks of independent work provided by the program must be

		completed in a timely manner, with correct reference to sources of information. During the preparation it is necessary to study the basic and reference literature, which will help to create a logical, meaningful report when presenting the presentation and competently answer the questions of classmates and the teacher. Under certain circumstances (skipping classes for good reasons, the introduction of distance learning, etc.) the student can send a presentation for assessment individually to the e-mail address specified in this syllabus.
17.	Educational component keywords	• Veterinary and sanitary inspection, meat, meat products, milk, dairy products, fish, fish products, eggs, HACCP.
18.	Access to Moodle.	https://cdn.snau.edu.ua/moodle/course/view.php?id=1532

2. CORRELATION BETWEEN MODULE LEARNING OUTCOMES (MLOs) AND PROGRAM LEARNING OUTCOMES (PLOs)

3d semester MLOs: On successful completion of the module the learner will be able to:	Program learning outcomes to be achieved by the OK (indicate the number according to the numbering given in the OP)		How assessed
	PLO9	**PLOs 12**	
MLO 1. Introduction to Vetsan examination. Goals, objectives and structure of the course. Historical reference.	+	+	survey of theoretical issues, performing tasks in laboratory and practical classes, testing, performing tasks of independent work
MLO2. Organization and methods of post-mortem veterinary and sanitary examination of carcasses and organs of slaughter animals.		+	survey of theoretical issues, performing tasks in laboratory and practical classes, testing, performing tasks of independent work
MLO 3. Technology and hygiene of meat canning and veterinary examination of canned meat products	+	+	survey of theoretical issues, performing tasks in laboratory and practical classes, testing, performing tasks of independent work
MLO 4. Food borne diseases and toxicosis and their prevention.	+	+	survey of theoretical issues, performing tasks in laboratory and practical classes, testing, performing tasks of

			independent work
MLO 5. New approaches to the technology of obtaining and veterinary control over the quality and safety of milk and dairy products.	+	+	survey of theoretical issues, performing tasks in laboratory and practical classes, testing, performing tasks of independent work
MLO 6. Veterinary examination of fish, meat of marine mammals and invertebrates.	+	+	survey of theoretical issues, performing tasks in laboratory and practical classes, testing, performing tasks of independent work

MODULE INDICATIVE CONTENT 3d semester

Topics	**Distribution of hours**			**Learning resources**
	Directed study		**Self-directed study**	
	Lectures	lab		Learning resources)
Topic 1 Introduction to Vetsan examination. Goals, objectives and structure of the course. Historical reference.	2	4	8	1,7,8.
Topic 2 Organization and methods of post-mortem veterinary and sanitary examination of carcasses and organs of slaughter animals. Fundamentals of technology and hygiene of slaughter animals processing. Morphology, chemical composition and commodity science of meat. Changes in meat during storage. Veterinary and sanitary examination of products of slaughter of animals during detection of infectious. invasive diseases, diseases of non-communicable etiology and poisonings.	2	4	8	2, 3,8.
Topic 3. Technology and hygiene of meat canning and veterinary examination of canned meat products.	2	4	8	4, 5, 12.
Topic 4. Food borne diseases and toxicosis and their prevention.	2	4	8	5, 6,13.
Topic 5. New approaches to the technology of obtaining and veterinary control over the quality and safety of milk and dairy products. Chemical composition and technological properties of milk. Veterinary and sanitary examination and sanitary assessment of milk for diseases and poisoning of animals.	2	4	10	1, 4, 7, 9.

Topic 6. Veterinary examination of fish, meat of marine mammals and invertebrates.	2	6	10	4,5,9
Total 90	12	26	52	

METHODS OF TEACHING AND TEACHING 3d semester

MLOs	Teaching methods (directed study)	Learning methods (self-directed study)	Hours
MLO1. Introduction to Vetsan examination. Goals, objectives and structure of the course. Historical reference.	**Methods of teaching by source of knowledge:** *Verbal:* story, explanation, conversation (heuristic and reproductive), lecture, instruction. *Visual:* demonstration, illustration, observation. **Active methods:** (use of technical teaching aids, use of training and control tests) **Interactive teaching methods:** (use of multimedia technologies.	**Methods of teaching by source of knowledge:** *Verbal:* work with a book (reading, translation, writing, taking notes, making tables, graphs, reference notes), *Visual:* observation. **Teaching methods by the nature of the logic of cognition** (analytical, *synthesis methods,* and *inductive method, deductive method, translational method).* **Active methods (brainstorming**, crossword puzzles, debates, round tables, binary classes, business and role-playing games, group research)**.** **Interactive learning technologies** (use of multimedia technologies, dialogue learning, student cooperation (cooperation)	12
MLO 2. Organization and methods of post-mortem veterinary and sanitary examination of carcasses and organs of slaughter animals.	**Methods of teaching by source of knowledge:** *Verbal:* story, explanation, conversation (heuristic and reproductive), lecture, instruction. *Visual:* demonstration, illustration, observation. **Active methods:** (use of technical teaching aids, use of training and control tests) **Interactive methods will present ting :** (use of multimedia technologes.	**Methods of teaching by source of knowledge:** *Verbal:* work with a book (reading, translation, writing, taking notes, making tables, graphs, reference notes), *Visual:* observation. **Teaching methods by the nature of the logic of cognition** (analytical, *synthesis methods,* and *inductive method, deductive method, translational method).* **Active methods (brainstorming**, crossword puzzles, debates, round tables, binary classes, business and role-playing games, group research)**.** **Interactive technologies teach ting** (use of multimedia technology, learning dialogue, cooperation of students (cooperation).	12
MLO 3 Technology and hygiene of meat canning and veterinary	**Methods of teaching by source of knowledge:** *Verbal:* story, explanation, conversation (heuristic and	**Methods of teaching by source of knowledge:** *Verbal:* work with a book (reading, translation, writing, taking notes, making tables, graphs, reference notes), *Visual:*	12

examination of canned meat products	reproductive), lecture, instruction. *Visual:* demonstration, illustration, observation. **Active methods:** (use of technical teaching aids, use of training	observation. **Teaching methods by the nature of the logic of cognition** (analytical, *synthesis methods,* and *inductive method, deductive method, translational method).* **Active methods (brainstorming**, crossword puzzles, debates, round tables, binary classes, business and role-playing games, group research)**.** **Interactive technologies teach ting**	
MLO 4. Food borne diseases and toxicosis and their prevention.	**Methods of teaching by source of knowledge:** *Verbal:* story, explanation, conversation (heuristic and reproductive), lecture, instruction. *Visual:* demonstration, illustration, observation. **Active methods:** (use of technical teaching aids, use of training and control tests) **Interactive methods will present ting :** (ie use of multimedia technologies, spreadsheets.	**Methods of teaching by source of knowledge:** *Verbal:* work with a book (reading, translation, writing, taking notes, making tables, graphs, reference notes), *Visual:* observation. **Teaching methods by the nature of the logic of cognition** (analytical, *synthesis methods,* and *inductive method, deductive method, translational method).* **Active methods (brainstorming**, crossword puzzles, debates, round tables, binary classes, business and role-playing games, group research)**.** **Interactive technologies teach ting** (use of multimedia technology, learning dialogue, cooperation	24
MLO 5. New approaches to the technology of obtaining and veterinary control over the quality and safety of milk and dairy products.	**Methods of teaching by source of knowledge:** *Verbal:* story, explanation, conversation (heuristic and reproductive), lecture, instruction. *Visual:* demonstration, illustration, observation. **Active methods:** (use of technical teaching aids, use of training and control tests) **Interactive methods will present ting :** (ie use of multimedia technologies, spreadsheets.	**Methods of teaching by source of knowledge:** *Verbal:* work with a book (reading, translation, writing, taking notes, making tables, graphs, reference notes), *Visual:* observation. **Teaching methods by the nature of the logic of cognition** (analytical, *synthesis methods,* and *inductive method, deductive method, translational method).* **Active methods (brainstorming**, crossword puzzles, debates, round tables, binary classes, business and role-playing games, group research)**.** **Interactive learning technologies** (use of multimedia technologies, dialogue learning, student cooperation	12
MLO 6. Veterinary examination of fish, meat of	**Methods of teaching by source of knowledge:** *Verbal:* story,	**Methods of teaching by source of knowledge:** *Verbal:* work with a book (reading,	18

marine mammals and invertebrates.	explanation, conversation (heuristic and reproductive), lecture, instruction. *Visual:* demonstration, illustration, observation. **Active methods:** (use of technical teaching aids, use of training and control tests) **Interactive methods will present ting :** (ie use of multimedia technologies, spreadsheets.	translation, writing, taking notes, making tables, graphs, reference notes), *Visual:* observation. **Teaching methods by the nature of the logic of cognition** (analytical, *synthesis methods,* and *inductive method, deductive method, translational method).* **Active methods (brainstorming**, crossword puzzles, debates, round tables, binary classes, business and role-playing games, group research)**.** **Interactive learning technologies** (use of multimedia technologies, dialogue learning, student cooperation	
MLO 4. Viruses and Prions	**Methods of teaching by source of knowledge:** *Verbal:* story, explanation, conversation (heuristic and reproductive), lecture, instruction. *Visual:* demonstration, illustration, observation. **Active methods:** (use of technical teaching aids, use of training and control tests) **Interactive methods will present ting :** (ie use of multimedia technologies, spreadsheets.	**Methods of teaching by source of knowledge:** *Verbal:* work with a book (reading, translation, writing, taking notes, making tables, graphs, reference notes), *Visual:* observation. **Teaching methods by the nature of the logic of cognition** (analytical, *synthesis methods,* and *inductive method, deductive method, translational method).* **Active methods (brainstorming**, crossword puzzles, debates, round tables, binary classes, business and role-playing games, group research)**.** **Interactive technologies teach ting** (use of multimedia technology, learning dialogue, cooperation	32

5. ASSESSMENT

5.1. Diagnostic assessment

5.2. Summative assessment

5.2.1. Intended learning outcomes methods: 3d semester

№	Summative assessment methods	Grades	Deadline
1.	Thematic survey	*20 points / 20 %*	Weekly
2.	Execution of tasks in laboratory- practical classes	*35 points / 35 %*	According to the schedule
4.	Report with a presentation on the subject of independent study of the discipline	*45 points / 45 %*	According to the schedule of delivery of modules

5.2.2. Grading criteria

Summative assessment	Unsatisfactory	Satisfactorily	Good	Excellent

method				
Thematic survey	*<12 points*	*12-15 points*	*15-18 points*	*20 points*
	The student can play only individual fragments of the course.	Most requirements are met, but some components are missing or insufficiently disclosed, there is no analysis of other approaches to the issue	All requirements of the task are fulfilled	All requirements of the task are fulfilled, creativity, thoughtfulness is shown, own solution of a problem is offered
Execution of tasks in laboratory-practical classes	*<12 points*	*12-15 points*	*15-18 points*	*20 points*
	Task requirements not met	Most of the tasks are performed using the basic theoretical principles, the student has difficulty explaining the rules for solving laboratory-practical problems. Execution of individual control tasks is significantly formalized, there is no deep understanding of the work	The student learned the basic material, and understands and performs lab-practical tasks and has suggestions for the direction of their solutions. Understands the main provisions that are decisive in the course, can solve similar problems with those discussed with the teacher, but allows a small number of inaccuracies .	Competitor realism is a theoretical ground material discipline in carrying lab-practical s work , able to analyze and correlate the results obtained from the discipline acquired knowledge , skills , practical skills
Multiple choice test	*≤ 5 points*	*6-9 points*	*10–13 points*	*14-15 points*
	The student gives the correct answer to several questions (≤ 33% of the correct answers) .	The student has some knowledge provided in the program of the discipline, has the basic provisions being studied and gives the correct answer to several questions (34-	The student is generally well versed in the material, knows the basic provisions of the material, and gives the correct answer to several questions (60-89% of the	The student demonstrates complete and solid knowledge of the study material in the amount that corresponds to the

		59% of correct answers) .	correct answers).	program of the discipline, correctly answers the test questions (90 -100% of correct answers).
Design and presentation report independently of the processed material	*< 9 points*	*1 0 - 19 points*	*20 - 39 points*	*4 0 - 45 points*
	The student does not have a complete understanding of the material on the discipline. The student is not performed independently is processing material.	Despite the fact that the program of discipline complied by student, but some components are missing, a student worked passively.	Know the basic and provisions ting with crucial at performing independent work / individual tasks. Errors in the answers are not significant .	All requirements, tasks are fulfilled, creativity, thoughtfulness is shown, own solution of a problem is offered.

Formative assessment

Formative exercises are designed to enable students to develop particular aspects of their learning, prior to summative assessments. Formative exercises are designed to help students use feedback and self-reflection to manage and develop their learning so that they can see how to improve their work.

№	**Formative Assessment elements**	**Date**
	3d semester	
1	Oral feedback after studying topics 1 - 3 , 6-8	3 weeks
2	Written feedback after studying topics 4 - 5	8 weeks
3	Written feedback from the teacher while working on laboratory-practical tasks	Within 1 week after execution
4	Oral feedback from the teacher after the story with a presentation on the topic of independent study of the discipline	During classes

№	**Summative assessment methods 4 th semester**	**Grades**	**Deadline**
	Autumn semester		
2.	Thematic survey	*20 points / 20 %*	Weekly
3.	Execution of tasks in laboratory-practical classes	*35 points / 35 %*	According to the schedule

5.	Report with a presentation on the subject of independent study of the discipline	*45 points / 45 %*		According to the schedule of delivery of modules
Summative assessment method	**Unsatisfactory**	**Satisfactorily**	**Good**	**Excellent**
Thematic survey	*<12 points*	*12-15 points*	*15-18 points*	*20 points*
	The student can play only individual fragments of the course.	Most requirements are met, but some components are missing or insufficiently disclosed, there is no analysis of other approaches to the issue	All requirements of the task are fulfilled	All requirements of the task are fulfilled, creativity, thoughtfulness is shown, own solution of a problem is offered
Execution of tasks in laboratory-practical classes	*<12 points*	*12-15 points*	*15-18 points*	*20 points*
	Task requirements not met	Most of the tasks are performed using the basic theoretical principles, the student has difficulty explaining the rules for solving laboratory-practical problems. Execution of individual control tasks is significantly formalized, there is no deep understanding of the work	The student learned the basic material, and understands and performs lab-practical tasks and has suggestions for the direction of their solutions. Understands the main provisions that are decisive in the course, can solve similar problems with those discussed with the teacher, but allows a small number of inaccuracies .	Competitor realism is a theoretical ground material discipline in carrying lab-practical s work , able to analyze and correlate the results obtained from the discipline acquired knowledge , skills , practical skills
Multiple choice test	*≤ 5 points*	*6-9 points*	*10–13 points*	*14-15 points*
	The student gives the correct answer to several questions (≤ 33% of the correct answers) .	The student has some knowledge provided in the program of the discipline, has the basic provisions being	The student is generally well versed in the material, knows the basic provisions of the material, and gives	The student demonstrates complete and solid knowledge of the study material in

		studied and gives the correct answer to several questions (34-59% of correct answers) .	the correct answer to several questions (60-89% of the correct answers).	the amount that corresponds to the program of the discipline, correctly answers the test questions (90-100% of correct answers).
Design and presentation report independently of the processed material	*< 9 points*	*1 0 - 19 points*	*20 - 39 points*	*4 0 - 45 points*
	The student does not have a complete understanding of the material on the discipline. The student is not performed independently is processing material.	Despite the fact that the program of discipline complied by student, but some components are missing, a student worked passively.	Know the basic and provisions ting with crucial at performing independent work / individual tasks. Errors in the answers are not significant .	All requirements , tasks are fulfilled, creativity, thoughtfulness is shown, own solution of a problem is offered.

6. LEARNING RESOURCES

Main Literature

1. Veterinary and sanitary examination with the basics of technology and standardization of livestock products / O.M. Yakubchak, VI Khomenko, SD Melnychuk and others. - Kyiv: LLC "Bioprom", 2005. 799 p.
2. Workshop on veterinary and sanitary examination with the basics of technology and standardization of livestock and crop products / O.M. Yakubchak and others. Kyiv: Bioprom Company, 2022. 256 p.
3. Yatsenko I. V., Bohatko N. M., Bukalova N. V., Bibin I. A., Fotina T. I. Hygiene and Examination of Products of Primary Processing of Slaughter Animals: Textbook. Kharkiv: Nova Ideolohiia, 2019. 268 p.
4. Yatsenko I. V., Bohatko N. M., Bukalova N. V., Bibin I. A., Fotina T. I. Hygiene of Plant Food Products: Textbook. Kharkiv, 2025. 321 p.
5. Yatsenko I. V., Bohatko N. M., Bulhakova N. V., et al. Hygiene and Examination of Edible Aquatic Organisms and Their Processed Products. Part 1: Hygiene and Examination of Fishery Products: Textbook. Kharkiv: Disa Plus, 2017. 680 p.

6. Yatsenko I. V., Bohatko N. M., Bulhakova N. V., et al. Hygiene and Examination of Edible Aquatic Organisms and Their Processed Products. Part 2: Hygiene and Examination of Aquatic Mammals, Aquatic Invertebrates, and Fish Products: Textbook. Kharkiv: Disa Plus, 2017. 648 p.
7. Fotina T. I., Petrov R. V., Berezovskyi A. V., et al. Veterinary and Sanitary Inspection of Fish, Marine Mammals, Invertebrates, and Biological Foundations of Fisheries: Monograph. Sumy, 2023. 249 p.=

Additional Literature

1. On Veterinary Medicine and Animal Welfare: Law of Ukraine No. 1206-IX of February 4, 2021. Available at: Verkhovna Rada of Ukraine Legislation Database (accessed: June 9, 2026).
2. Yakubchak O. M., Khomenko V. I., Melnychuk S. D., et al. *Veterinary and Sanitary Examination with Fundamentals of Technology and Standardization of Animal Products.* Kyiv, 2005. 800 p.
3. On the Withdrawal from Circulation, Processing, Disposal, Destruction or Further Use of Substandard and Dangerous Products: Law of Ukraine No. 1393-XIV of January 14, 2000.

Electronic resources.

http://www.allvet.ru/referats/35.php

http://techpharm.ru/animals3_vet3-77

http://agrorad.ru/threads

http://gosvetvlad.ru/news/events/2015-03-05-vetsanekspertiza---eyo.htm

https://cdn.snau.edu.ua/moodle/course/view.php?id=1532

Other source

1. Shkromada, O., Fotina, **T., Fotina,** H., Sergeychik, T., & Kaliuzhna, T. (2024). Effectiveness of probiotics in growing broiler chicken. Scientific Horizons, 27(1), 32-40. https://doi.org/10.48077/scihor1.2024.32

2. **Fotina, T.,** Yarmoshenko, Yu., Dudnyk, Ye., Kovalenko, L., & Negreba, Y. (2024). Results of iodine-based treatment application in carp aquaculture within closed water systems. Scientific Horizons, 27(9), 20-31. https://doi.org/10.48077/scihor9.2024.20

3. **Fotina, T.,** Hunko, O., Fotin, A., Borkovskyi, R., & Morozov, B. (2024). Peculiarities of rearing poultry by floor method on deep bedding. Scientific Horizons, 27(8), 9-23. https://doi.org/10.48077/scihor8.2024.09

4. Shkromada, O., **Fotina, T.,** Ivchenko, V., Chivanov, V., Sirobaba, V., Shvets, O., Pikhtirova, A., Babenko, O., Vorobiova, I., & Dychenko, T. (2024). Determining the characteristics of concrete in a historical building under the influence of climatic and biological factors. Eastern-European Journal of Enterprise Technologies, 1(6 (127), 39–46. https://doi.org/10.15587/1729-4061.2024.298565

5. Liu, Z., Wang, L., Gao, P., Yu, Y., Zhang, Y., Fotin, A., Wang, Q., Xu, Z., Wei, X., **Fotina, T.,** & Ma, J. (2023). Salmonella Pullorum effector SteE regulates Th1/Th2 cytokine expression by triggering the STAT3/SOCS3 pathway that suppresses NF-κB activation. Veterinary microbiology, 284, 109817. https://doi.org/10.1016/j.vetmic.2023.109817