

Ss. CYRIL AND METHODIUS UNIVERSITY IN SKOPJE
FACULTY OF VETERINARY MEDICINE - SKOPJE



Joint meeting
5th International Vet-Istanbul Group Congress
&
8th International Scientific Meeting
Days of veterinary medicine - 2018

BOOK OF ABSTRACTS

23-27 September 2018
Ohrid, R. of Macedonia

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5th INTERNATIONAL VET-ISTANBUL GROUP CONGRESS AND
8th INTERNATIONAL SCIENTIFIC MEETING
DAYS OF VETERINARY MEDICINE - 2018**

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FOREWORD

Dear Colleagues,

It is my great pleasure to welcome you to the 5th International Veterinary Days of veterinary medicine - 2018, Ohrid, 23th to 27th September.

This year, in cooperation with the Faculty of Veterinary Medicine, we'll be organizing an academic cooperation (VEE) partners, by the public good.

The Faculty of Veterinary Medicine is proud to have together outstanding experts in the field of research, veterinary researchers, veterinary doctoral students, off in the veterinary education following topics: animal health and food safety.

The program for the conference will retain its usual popular student papers and posters by authors, whose research of the International Scientific Meeting is selecting 117 papers followed by two poster sessions and invited speakers for the talks.

A successful conference is a place, where ideas about science are debated, which will open new horizons for enjoyment.

On the behalf of the Faculty of Veterinary Medicine in Macedonia.

We look forward to your participation.

12.50-13.00	<i>Effects of Black Cumin addition to rations on the performance parameters in laying hens</i> Tahir Balevi , Uçkun Sait Uçan, Oğuzhan Kahraman, Abdullah Özbilgin
13.00-14.00	Lunch
Moderators: Prof. Zehra Hajrulai-Musliu and Prof. Ali Aydin	
Scientific papers – Oral presentations	
14.00-14.10	<i>Evaluation Of The Quechers Method And Gas Chromatography–Mass Spectrometry For The Analysis Fipronil And Its Metabolites In Egg Products</i> Aleksandra Tasic , Ksenija Nestic, Tijana Mitrovic, Nebojsa Vukovic
14.10-14.20	<i>Optimization And Validation Of Lc-Ms/Ms Method After Quechers Sample Preparation For Determination Of Fipronil And Its Metabolites In Eggs And Chicken Muscle</i> Elizabeta Dimitrieska-Stojkovič , Dushica Koceva, Aleksandra Angeleska, Biljana Stojanovska-Dimzosa, Gordana Ilievska, Risto Uzunov, Stefan Jovanov, Zehra Hajrulai-Musliu, Dean Jankuloski
14.20-14.30	<i>Determination Of B-Agonist Residues In Liver Using Lc-Ms/Ms Method</i> Risto Uzunov , Zehra Hajrulai-Musliu, Velimir Stojkovski, Elizabeta Dimitrieska-Stojkovic, Biljana Stojanovska-Dimzosa, Stefan Jovanov, Dean Jankuloski
14.30-14.40	<i>The Evaluation Of Histamine Levels In Carp (Cyprinus Carpio) Samples Collected From Afyonkarahisar, Turkey</i> Acaroz Ulas
14.40-14.50	<i>Detection Of Nitroimidazole Residues In Chicken Muscle Tissue And Egg Samples Using Competitive Enzyme Immunoassay</i> Duška Koceva , Elizabeta Dimitrieska-Stojkovič, Gordana Ilievska, Zehra Hajrulai-Musliu, Dean Jankuloski
14.50-15.00	<i>Development And Validation Of A P-35S, T-NOS, And P-Fmv Multiplex Real-Time PCR Screening Method To Detect Regulatory Genes Of Genetically Modified Organisms In Food</i> Katerina Blagoevska , Dean Jankuloski, Gordana Ilievska
15.00-15.10	<i>Determination Of Total Phosphorus Content In Complete Dog Foods And Its Part In The Nutritional Balance</i> Ana Angelovska , Radmila Chrcheva Nikolovska, Zehra Hajrulai Musliu

Parallel Session II

SCIENTIFIC SESSION V

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Plenary lecture – Invited speaker	
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VALIDATION OF LC-MS/MS METHOD FOR DETECTION OF PENICILLIN ANTIBIOTICS IN MILKGjylai Alija^{1*}, Zehra Hajrulai-Musliu², Risto Uzunov²¹*Department of Pharmacy, Faculty of Medical Sciences, University of Tetovo, Ilinden Str. n.n., 1200 Tetovo, R. of Macedonia*²*Food Institute, Faculty of Veterinary Medicine, Ss. Cyril and Methodius University in Skopje, Lazar Pop Trajkov 5-7, 1000 Skopje, Macedonia*

Antibiotics are widely used for therapy and prevent of diseases and as growth promoting agents in farm animals. Penicillins are group of β -lactam antibiotics and they are used for treat of bacterial infections in veterinary and human medicine. Treatments of farm animals with antibiotics results with presence of residues from these substances in milk and tissues. The consumption of food products containing penicillin drug residues may be harmful for human health because could cause allergic side effect, carcinogenic, estrogenic and neurotoxicologic effects and increase of bacterial resistance to antibiotics. Therefore, the European Union has established maximum residue levels (MRLs) for most antibiotics in milk and animal tissues. The aim of this study is validation of LC-MS/MS method for detection of 3 penicillin antibiotics (ampicillin, amoxicillin and penicillin G) in cow, sheep and goat milk. The extraction of penicillin antibiotic residues from milk was performed with acetonitrile and chromatographic separation was carried out on C18 column (50 x 2.1 mm, 1.7 μ m) with mobile phase A: 0.1% formic acid in water and mobile phase B: acetonitrile. Optimization of MS/MS method was performed with standards of these 3 penicillins. Validation of the method was performed according the criteria of Commission Decision 2002/657/EC. In validation procedure were evaluated: linearity, decision limit ($CC\alpha$), detection capability ($CC\beta$), accuracy, precision and reproducibility of the method. The results for optimization of MS/MS method are with agreement with literature data. The method demonstrated good linearity on the concentration range from 2.0 to 40.0 μ g/L with coefficient of correlation (r^2) from 0.9869 to 0.9983. $CC\alpha$ was ranged from 2.07 to 2.75 μ g/L, and $CC\beta$ was ranged from 3.32 to 3.86 μ g/L. For determination of accuracy, precision and reproducibility blank milk samples were fortified with a mixture of penicillin standards at three levels (0.5 x MRL, 1x MRL and 1.5x MRL). The MRL for ampicillin, amoxicillin and penicillin G is 4.0 μ g/L. The average recoveries for all three concentration level varied from 86 to 104 %. The precision and reproducibility were evaluated by RSD, % (relative standard deviation, %). The RSD for precision ranged from 3.85 % to 10.20 %, while the RSD for reproducibility ranged from 4.78 % to 9.95 %. In conclusion, the LC-MS/MS method for detection of ampicillin, amoxicillin and penicillin G was validated. The validation results are in accordance with recommended criteria in 2002/657/EC and this method can be used for routine analysis for detection of these 3 antibiotics in cow, sheep and goat milk.

Key words: penicillin antibiotics, milk, validation, LC-MS/MS method