



**The 8th International Conference  
on Pharmaceutical Sciences and Pharmacy Practice**

**dedicated to the 80th anniversary of the  
Museum of History of Lithuanian  
Medicine and Pharmacy**

Book of abstracts



**December 15, 2017  
Kaunas, Lithuania**

**The International Conference on Pharmaceutical Sciences and Pharmacy practice is organized by the Faculty of Pharmacy of Lithuanian Health Sciences University in collaboration with Lithuanian Pharmaceutical Association and LSMU FF Alumni Association.**

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**ISBN 978-9955-15-517-1**

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Language of abstracts was not corrected.  
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Optimization of derivatization procedure for the quantification of succinic acid by using gas chromatography — mass spectrometry method J. Kamarauskaitė, M. Marksa, L. Jarukas, R. Baniėnė, S. Trumbeckaitė, L. Ivanauskas	70
Composition analysis of <i>Eucalyptus</i> L'Hér. leaves phenolic compounds K. Kolpakova, K. Zymonė, M. Liaudanskas, V. Janulis	72
Establishment of elemental composition of the leaves and rhizomes of <i>Iris hybrida</i> hort. "Indian Pow Wow" K. Anastasia, K. Vladimir, M. Olga	73
Uncoupling effects of 1,4-naphthoquinone derivatives on mitochondrial respiration rate in glioma cells J. Kuseliauskytė, D. Balčaitis, J. Liobikas, D. Majienė	76
Fatty acids of red color Onion peels V. Ju. Kuznietsova, V.S. Kyslychenko, N.A. Suschuk	77
Identification of benzodiazepines in mixture using high performance liquid chromatography and gas chromatography – mass spectrometry methods J. Kviesulaitytė, M. Marksa, A. Ževžikovienė	79
Determination of sesquiterpene lactones quantitative content in <i>Hosta plantaginea</i> Tratt. rhizomes with roots, leaves and flowers O.A. Kyslychenko, V.V. Protska, I.O. Zhuravel	80
Comparison of calcium oxalate crystals-raphides, and oxalic acid content in <i>Chamerion angustifolium</i> (L.) Holub during different vegetation phases E. Laskauskaitė, N. Savickienė, Ona Ragazinskienė <sup>2</sup> , Kristina Gaivelytė	81
Evaluation of the antioxidant activity of the methanol extract of <i>Eucalyptus globulus</i> Labill. leaves and determination of bioactive compounds using UPLC-ESI-MS/MS method M. Liaudanskas, E. González-Burgos, V. Žvikas, J. Viškelis, M. Pilar Gómez-Serranillos	83
A practical evaluation of the antioxidative properties of sage ( <i>Salvia officinalis</i> L.) extracts V. Marcelionytė, A. Maruška, O. Ragažinskienė	85
Qualitative and quantitative analysis of curcumin in food supplements containing turmeric ( <i>Curcuma longa</i> L.) using high performance liquid chromatography method E. Marčiukaitytė, M. Marksa, A. Ževžikovas, A. Ževžikovienė	86
Development of the HPLC method for the determination of related substances in active pharmaceutical ingredient uridine 5'-monophosphate disodium salt A. Materienko, I. Bezruk, M. Almakaiev, S. Gubar, V. Georgiyants	87
Secondary metabolites from <i>Angelica archangelica</i> L. synergism with enilconazolium R. Mickienė, A. Maruška, O. Ragažinskienė	89
Marketing factors affecting the choice of living medicinal products R. Motienė, J. Zmitrulevičienė	90

## ABSTRACTS OF POSTERS

In contrast with the above presented data, lawsone, due to its lower biological activity, was used at much higher concentrations. Thus, it was found that lawsone at 10-150  $\mu\text{M}$  concentrations statistically significantly (by 11-56 %) increased the mitochondrial non-phosphorylating respiration rate both, complex I and I+II substrates. It is proven, that moderate separation of oxidation and phosphorylation systems may reduce mitochondrial ROS generation, which is a positive impact on cells (3,4).

Conclusions: A set of 1,4-naphthoquinones investigated in this study (lawsone, plumbagin, menadione and juglone) increased mitochondrial non-phosphorylating respiration rate in a concentration-dependent manner. Lawsone demonstrated the weakest effect among tested quinone.

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## Fatty acids of red color Onion peels

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Lipids are considered one of the most elemental nutrients for humans. Lipids consist of fatty acids classified mostly according to the presence or absence of double bonds as saturated, monounsaturated and polyunsaturated fatty acids; further, as cis or trans based on the configuration of the double bonds [2].

Fatty acids composition of vegetable oils is formed by a mixture of saturated and unsaturated fatty acids classified according to the number of unsaturated bonds as monounsaturated or polyunsaturated fatty acids. So, their impact on human health could be assessed according to individual fatty acids because of their different influences on human health and risks of serious diseases [2].

Onion (*Allium cepa*) are the most important *Allium* species consumed all over the world. Onions are perennials that are cultivated for food worldwide [1]. There are many varieties. Most onion bulbs are white, yellow, or red. The analysis included two onion cultivars (*Allium cepa* L.) of red color onion peels, which are cultivated in Ukraine: Red Baron and Mars.

## ABSTRACTS OF POSTERS

Quantitative determinations of fatty acids methyl esters were conducted according to [3] using a gas chromatograph with a flame ionization detector. Identification of fatty acids methyl esters was performed by comparing their retention times with those of reference standards. The results of fatty acids were expressed as percentages of total fatty acids methyl esters. The fatty acids compositions are presented in Table 1.

**Table 1.** Fatty acids composition of Onion red color peels

Fatty acid	Carbon number	% of total fatty acids	
		Red Baron	Mars
Lauric acid	C <sub>12:0</sub>	3,27	1,37
Myristic acid	C <sub>14:0</sub>	3,54	5,84
Pentadecanoic acid	C <sub>15:0</sub>	3,35	2,84
Pentadecenic acid	C <sub>15:1</sub>	2,12	0,89
Palmitic acid	C <sub>16:0</sub>	5,64	8,57
Palmitoleic acid	C <sub>16:1</sub>	4,53	6,52
Stearic acid	C <sub>18:0</sub>	13,57	8,29
Oleic acid	C <sub>18:1</sub>	15,68	17,27
Linoleic acid	C <sub>18:2</sub>	8,15	9,86
Linolenic acid	C <sub>18:3</sub>	5,68	7,39
Arachic acid	C <sub>20:0</sub>	4,57	7,72
Gondolic acid	C <sub>20:1</sub>	4,49	2,12
Behenic acid	C <sub>22:0</sub>	2,87	2,27
Erucic acid	C <sub>22:1</sub>	2,48	1,95
Eicosadienoic acid	C <sub>20:2</sub>	2,35	2,15
Total unidentified acids		17,71	14,95
Total Saturated fatty acids		36,81	36,90
Total Unsaturated fatty acids		45,48	48,15

Fifteen fatty acids were identified in the onion red color peels two onion cultivars, seven of which were saturated and eight were unsaturated. The unsaturated fatty acids were predominant in the onion peels both varieties.

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