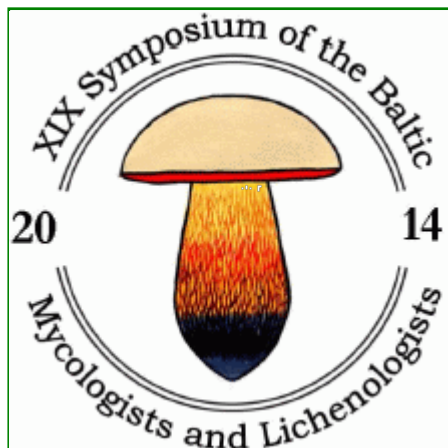


# PROGRAMME AND ABSTRACTS

22-26 September, 2014

XIX SYMPOSIUM OF THE BALTIC MYCOLOGISTS AND LICHENOLOGISTS



Skede, LATVIA, Sep 22–26, 2014

PRINCIPAL SUPPORTING ORGANIZATIONS

Latvian Mycological Society



Latvian Museum of Natural History



Latvia University of Agriculture



University of Latvia



Latvian State Forest Research Institute



OTHER SUPPORTING ORGANIZATIONS



<a href="#">General info</a>	<b><a href="#">Programme</a></b>	<a href="#">Venue, date</a>	<a href="#">Committees</a>	<a href="#">Registration</a>	<a href="#">Participants</a>	<a href="#">Latest news</a>	<a href="#">Abstracts</a>
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**Programme**

as on September 22, 2014

<b>Click to go to:</b>	<a href="#">Mo, Sep 22</a>	<a href="#">Tu, Sep 23</a>	<a href="#">We, Sep 24</a>	<a href="#">Th, Sep 25</a>	<a href="#">Fr, Sep 26</a>
<b>Click to go to:</b>	<a href="#">Session 1</a>	<a href="#">Session 2</a>	<a href="#">Session 3</a>	<a href="#">Session 4</a>	<a href="#">Posters 1,2</a>

**Monday, September 22**

<b>14.00</b>	<b>Participant arrival in Riga</b> , Latvian Museum of Natural History (Kr.Barona Str. 4)
<b>15.00</b>	<b>Departure from Riga</b> to Mežmāja, Šķēde
<b>18.00</b>	<b>Registration</b>
<b>19.00</b>	<b>Get-together party</b>

**Tuesday, September 23**

16.00 -16.15	<u>Jurga Motiejūnaitė</u> , Gražina Adamonytė, Mindaugas Dagys, Reda Iršėnaitė, Tatjana Iznova, Audrius Kačergius, Jonas Kasparavičius, Ernestas Kutorga, Svetlana Markovskaja, Dalytė Matulevičiūtė, Dalia Pečiulytė, Ričardas Taraškevičius. Fungi under eutrophication: a case of great cormorant colony in pine forest.
16.15 -16.30	Sandrina A. Heleno, Isabel C.F.R. Ferreira, Ana Ćirić, Jasmina Glamočlija, <u>Anabela Martins</u> , Maria João R.P. Queiroz, Marina Soković. <i>Coprinopsis atramentaria</i> extract, organic acids and synthesized methylated derivatives as antibacterial and antifungal agents.
<b>16.30 -17.30</b>	<b>Poster Session</b>
16.30	Yuli Shatz (MedPro Nutraceuticals). <i>Phallus impudicus</i> properties and its use.
<b>18.00</b>	<b>Dinner</b>

### Wednesday, September 24

<b>08.30 -09.00</b>	<b>Breakfast</b>	
<b>09.00 -13.00</b>	<b>Field trip</b>	
<b>13.00 -14.00</b>	<b>Lunch</b>	
<b>14.00 -16.00</b>	<b>Session 4</b>	<b>Co-chairs: Ieva Druva-Lūsīte, Rossitza Rodeva</b>
14.00 -14.15	<u>Rasa Buožytė</u> , Gražina Adamonytė, Reda Iršėnaitė, Jonas Kasparavičius, Elena Klyukina, Ernestas Kutorga, Svetlana Markovskaja, Jurga Motiejūnaitė. The experiment of nitrogen addition and artificial drought in scots pine stand: an effect on fungal communities	
14.15 -14.30	<u>Leho Tedersoo</u> and The Fungal Macroecology Consortium. Global Biodiversity of Soil Fungi and the Potential Effect of Climate Change	
14.30 -14.45	<u>Ieva Druva-Lūsīte</u> , Daina Feldmane, Valentīna Pole, Imants Missa, Edgars Rubauskis. Seasonal activity of arbuscular mycorrhiza into sour cherries ( <i>Prunus mahaleb</i> ) roots.	
14.45 -15.00	S. Deshaware, O. Pastinen, H. Ojamo, <u>Salem Shamekh</u> . Truffle growth and cultivation: media optimization and investigation of biomolecules.	
15.00 -15.15	<u>Rossitza Rodeva</u> , Z. Stoyanova, S. Nedyalkova. <i>Davidiella tassiana</i> as a component of leaf spotting disease complex on durum wheat.	
15.15 -15.30	Julija Volkova, <u>Lelde Grantīna-Ievina</u> . Identification of main causal agents of apple rot before harvest and during storage.	

associated fungi on Norway spruce in declining Norway spruce stands in Latvia.

**Jūratē Repečkienē, Jurgita Švedienē, Algimantas Paškevičius, Rūta Tekorienē, Vita Raudonienē, Eglē Gudeliūnaitē, Pranas Baltrėnas, Alvydas Zagorskis, Antonas Misevičius.** Fungi, yeasts and bacteria in plate-type air treatment biofilter during filtration of volatile compounds.

**Alvydas Zagorskis, Antonas Misevičius.** Fungi, yeasts and bacteria in plate-type air treatment biofilter during filtration of volatile compounds.

**Jurgita Švedienē, Vita Raudonienē, Jūratē Repečkienē, Algimantas Paškevičius, Rūta Tekorienē, Eglē Gudeliūnaitē, Edita Baltrėnaitē.** The change of microorganisms quantity in biofilter with pine biocarbon.

**Svetlana Markovskaja, Vitalij Novickij, Audrius Grainys, Jurij Novickij.** Susceptibility of water molds to high intensity magnetic field treatment.

**Ângela Fernandes, Amilcar L. Antonio, João C.M. Barreira, M. Beatriz P.P. Oliveira, Anabela Martins, Isabel C.F.R. Ferreira.** Gamma irradiation preserves the nutritional profile of wild *Boletus edulis* Bull.:FR.

**Triin Varvas, Kertu Kais.** Fungal endophytes from leaves of three ericaceous plants in Estonia.

**Lauma Brūna, Natālija Arhipova, Tālis Gaitnieks.** Species richness of wood-inhabiting fungi on logs and stumps of Norway spruce infected by *Heterobasidion parviporum*.

**Astra Zajuma, Lauma Brūna, Tālis Gaitnieks.** Distribution of *Heterobasidion* spp. and *Armillaria* spp. in young pine forest stands in Latvia, *one-year observations*.

**Jūratē Ramanuskienē, Irena Gaurilčikienē, Rūta Česnulevičienē.** Effects of eyespot severity on the productivity of winter wheat.

**Biruta Bankina, Gunita Bimšteine, Antons Ruža, Ingrida Neusa-Luca, Ance Roga, Dāvids Fridmanis.** *Oculimacula* spp. – important pathogen of wheat crown rot.

**Karina Stumbriene, Skaidre Suproniene, Povilas Svegzda, Simonas Sakalauskas.** Changes in *Fusarium* spp. species composition from Lithuanian wheat in year 2005-2013.

**Olga Treikale, Zane Vigule, Brigita Javoīša, Jeļena Pugačova.** The pathogenic mycoflora of cereals in Latvia

**Jeļena Pugačova, Brigita Javoīša, Olga Treikale.** Control of *Lophodermium seditiosum* on *Pinus sylvestris* seedlings in Latvian forest nursery.

**Jūlija Volkova.** The fungal flora on cultivated highbush blueberries in Latvia differs from what is found on native *Vaccinium* species.

**Inga Moročko-Bičevska, Jamshid Fatehi, Olga Sokolova.** Diversity of Diaporthalean fungi on *Rubus* and *Fragaria* hosts.

**Olga Sokolova, Inga Moročko-Bičevska, Jamshid Fatehi.** Diversity of pear pathogen *Venturia pyrina*.

# **COPRINOPSIS ATRAMENTARIA EXTRACT, ORGANIC ACIDS AND SYNTHESIZED METHYLATED DERIVATIVES AS ANTIBACTERIAL AND ANTIFUNGAL AGENTS**

**Sandrina A. Heleno<sup>1,2</sup>, Isabel C.F.R. Ferreira<sup>1</sup>, Ana Ćirić<sup>3</sup>, Jasmina Glamočlija<sup>3</sup>, Anabela Martins<sup>1</sup>, Maria João R.P. Queiroz<sup>2</sup>, Marina Soković<sup>3</sup>**

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Mushrooms have been studied for their antimicrobial activity and revealed promising results against pathogenic bacteria and fungi. *Coprinopsis atramentaria* (Bull.: Fr.) Redhead, Vilgalys&Moncalvo, is a wild edible mushroom previously characterized by us for its nutritional composition, and the methanolic extract showed antioxidant and antitumor activities *p*-Hydroxybenzoic(HA) (4.71 mg/100 g dry weight), *p*-coumaric (CoA) (0.82 mg/100 g) and cinnamic (CA) (1.70 mg/100 g) acids were identified in the mentioned extract. Methylated derivatives of these identified organic acids were synthesized in order to obtain a complete series of methylated derivatives of each organic acid. The antimicrobial and demelanizing activities of *C. atramentaria* extract, identified organic acids and synthesized methylated derivatives were evaluated and compared. The antifungal activity was stronger than the antibacterial effects. The individual compounds (mostly organic acids) gave higher activity than the extract and even higher than the standards used in the assays. Methylated derivatives presented the highest demelanizing activity towards *Aspergillus niger*, *A. fumigatus* and *Penicillium verrucosum var. cyclopium*. The inclusion of methyl groups in the parental compound CoA strongly increased its antibacterial and antifungal activities, while in the case of HA and CA the inclusion of methyl groups increased the demelanizing activity, but decreased the antimicrobial properties. The present work contributes to the knowledge of the mechanisms involved in the antimicrobial properties of organic acids usually present in mushrooms and that suffer metabolism, namely methylation reactions. Organic acids and methylated derivatives could be used as antimicrobial agents.

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