



INTERNATIONAL CONFERENCE SMART BIO

3rd International Conference SmartBio

2-4 May, 2019

Kaunas

CERTIFICATION OF PARTICIPATION

We confirm that

Anatolii Masloyid

participated in 3rd International Conference SmartBio (ICSB)

2-4 May, 2019.

Head of organizing committee:
Prof. Dr. Saulius Mickevičius



A handwritten signature in blue ink, appearing to be 'Saulius Mickevičius', written over a horizontal line.

A.V.

Poster presentations

2-May-2019 VMU Small hall (S. Daukanto g. 28, Kaunas)

Poster session 1 13:00-14:00

Nr.	
1.	<p>A Nocturnal Migrant Songbird Regularly Makes Prolonged Non-Stop Flights Of 12-60 Hours When Migrating Over The Mediterranean-Sahara Barrier</p> <p>Gintaras Malmiga¹, Bengt Hansson², Teresa Montràs-Janer³, Maja Tarka⁴, Thomas Alerstam², Dennis Hasselquist²</p> <p>¹Laboratory of Avian Ecology, Nature Research Centre, Vilnius, Lithuania, ²Department of Biology, Lund University, Lund, Sweden, ³Department of Ecology, Swedish University of Agricultural Sciences, Sweden, ⁴Centre for Biodiversity Dynamics, Norwegian University of Science and Technology, Trondheim, Norway</p>
2.	<p>African Swine Fever Virus Fragments Sequence Analysis In Samples Collected From Wild Boars And Domestic Pigs</p> <p><u>S. Pilevičienė</u>^{1,2}, V. Jurgelevičius^{1,2}, A. Paulauskas², Ž. Janeliūnas^{1,2}</p> <p>¹National Food and Veterinary Risk Assessment Institute, Vilnius, Lithuania ²Vytautas Magnus University, Kaunas, Lithuania</p>
3.	<p>Agricultural Production In Ukraine: Ecological Challenges And Effect On Life Quality</p> <p>V.F. Petrychenko¹, O.V. Korniychuk¹, I.S. Voronetska¹, Y.Y. Ovchynnykova²</p> <p>¹Institute of Feed Research and Agriculture of Podillya of NAAS, 16, Yunosti Avenue, Vinnytsia, Ukraine, 21100, ²Vasyl' Stus Donetsk National University 21, 600-ritchka Str., Vinnytsia, Ukraine, 21021</p>
4.	<p>Agrogenic Biotope Transformation Of Forest-Steppe Animals Of Kazakhstan</p> <p>V.S. Vilkov, S.V. Pashkov</p> <p>NORTH KAZAKHSTAN STATE UNIVERSITY NAMED AFTER M. KOZYBAYEV, KAZAKHSTAN</p>
5.	<p>Analysis Of Raised Bog Humidity Conditions Using Modis Ndvi</p> <p><u>Rasa Šimanauskienė</u>¹, Rita Linkevičienė¹, Maciej Bartold², Katarzyna Dąbrowska-Zielińska², Julius Taminskas³</p> <p>¹Institute of Geosciences, Vilnius university, Čiurlionio str. 21, Vilnius, 03101, Lithuania, ²Institute of Geodesy and Cartography, Modzelewskiego 27, 02-679 Warsaw, Poland, ³Nature Research Centre, Akademijos str. 2, LT-08412 Vilnius, Lithuania.</p>
6.	<p>Antimicrobial Peptides From Plants As Components Of “Next-Generation” Hybrid Fungicides</p> <p><u>Eugene Rogozhin</u>^{1,2,3}</p>

	<p><u>Diana Navickaitė</u>¹, Paulius Ruzgys¹, Martynas Maciulevičius¹, Sonam Chopra¹ Saulius Šatkauskas¹</p> <p>¹<i>Biophysical Research Group, Faculty of Natural Sciences, Vytautas Magnus University, Vileikos str. 8, Kaunas, LT - 44404, Lithuania</i></p>
15.	<p>Cell Sensitization Induced By Application Of Microsecond Electric Fields <i>In Vitro</i></p> <p><u>Neringa Barauskaitė</u>¹, Paulius Ruzgys¹</p> <p>¹<i>Faculty of Natural Sciences, Vytautas Magnus University, Kaunas, Lithuania</i></p>
16.	<p>Cell-Iq Microscopy And Rtca For Real-Time Investigation Of Multipotent Mesenchymal Stromal Cells Cocultured With Leukemic Jurkat T Cells</p> <p>Vladimir V. Malashchenko¹, Egor O. Shunkin¹, Valeria V. Shupletsova¹, Olga G. Khaziakhmatova¹, Kristina A. Yurova¹, <u>Elena S. Melashchenko</u>¹, Larisa S. Litvinova¹, Igor A. Khlusov^{2,3}</p> <p>¹<i>Immanuel Kant Baltic Federal University, Laboratory of Immunology and Cell Biotechnology, Kaliningrad, 236041, Russia;</i> ²<i>Tomsk Polytechnic University, Research School of Chemistry & Applied Biomedical Sciences, Tomsk, 634050, Russia;</i> ³<i>Siberian State Medical University, Department of Morphology and General Pathology, Tomsk, 634050, Russia</i></p>
17.	<p>Change Of Soil Phosphatase Activity During Inoculation Of Sugar Beet Seeds By Polymycobacterium And Agrofil</p> <p>Anatolii Masloyid¹</p> <p>¹<i>Vinnitsia National Agrarian University, 21008, Vinnytsia, Sonyachna st., 3, Ukraine</i></p>
18.	<p>Characterization Of Oxidative Stress In Tobacco Shoot Culture <i>In Vitro</i></p> <p><u>Elena Andriūnaitė</u>¹, Inga Tamošiūnė¹, Rytis Rugienius¹, Vidmantas Stanys¹, Danas Baniulis¹</p> <p>¹<i>Institute of Horticulture, Lithuanian Research Centre for Agriculture and Forestry, Kaunas st. 30, Babtai LT-54333, Kaunas distr.,</i></p>
19.	<p>Cleavage Of Ompx With Proteolysin Can Regulate <i>Serratia Proteamaculans</i> Invasion</p> <p>Olga Tsaplina¹</p> <p>¹<i>Institute of Cytology, Russian Academy of Sciences, Saint-Petersburg, Russia</i></p>
20.	<p>Climate Related Changes Of Spring Barley Phenology In Lithuania</p> <p><u>Martynas Klepeckas</u>¹, Romualdas Juknys¹, Arvydas Kanapickas¹, Gintarė Sujetovienė¹</p> <p>¹<i>Vytautas Magnus University, Department of Natural sciences, Vileikos St. 8, LT-44404 Kaunas, Lithuania</i></p>
21.	<p>Cloning And Characterization Of Recombinant Protein Cpf1 From V Type Crispr/Cas System From <i>Moraxella Bovis</i></p> <p><u>Valeriya Vasikhovskaya</u>¹, Margarita Romanenko¹, Sergey Netesov¹</p> <p>¹<i>Novosibirsk State University, Novosibirsk, Russia</i></p>
22.	<p>Combined Effect Of Future Climate And Uv-B Radiaton On Garden Lettuce</p> <p>Giedrė Kacienė¹</p> <p>¹<i>Vytautas Magnus University</i></p>

Change of Soil Phosphatase Activity During Inoculation of Sugar Beet Seeds by Polymycobacterium and Agrofil

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Introduction

Enzymatic activity of the soil accurately reflects its biological properties. The enzyme phosphatase is a product of the metabolism of soil biocenosis. As a result of long-term agricultural production, under the influence of mineral fertilizers, (the coefficient of use of phosphate fertilizers is not more than 0.60), pesticides, weather conditions the microflora and enzymatic activity of the soil changes.

To reduce the anthropogenic impact of pesticides, mineral fertilizers and pathogenic microflora, and to increase the biologically valuable microflora, phosphate solubilization, phosphate mobilizing bacterial drug Polymixobacterium was used on the basis of strain of bacteria Bacillus polymixa strain - KB, Agrofil - nitrogen fixing agent based on the strain of associative bacteria Agrobacterium radiobacter- 10 of which inoculated seeds of sugar beet hybrids.

The results and discussion.

The inoculation of sugar beet seeds with bactericides Polymixobacterium and Agrofil contributed to a significant increase ($P > 0.95$) of phosphatase activity of the soil in the root crop rhizosphere on different backgrounds of organomineral nutrition during the growing season (Fig. 1, Fig. 2). The determinants influencing the phosphatase activity were hydrothermal conditions and as a result the physico-chemical characteristics of the soil

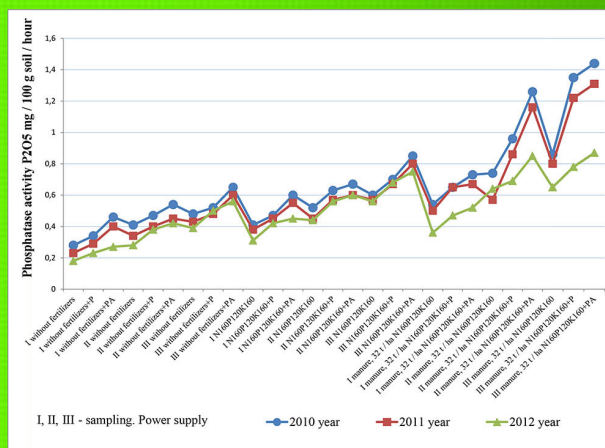


Fig. 1 Phosphatase activity of the soil on different backgrounds of organo-mineral nutrition

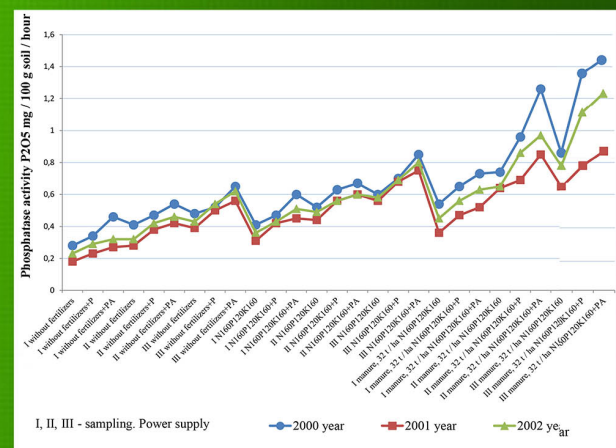


Fig. 2 Phosphatase activity of the soil on different backgrounds of organo-mineral nutrition

Conclusion

The research was carried out in 2000-2018 at various organoleptic mineral feeds (without fertilizers: N160 P120 K160 and N160 P120 K160 + Manure, 32 t/ha) and in different weather conditions. During inoculation with Polymycobacterin, an increase in the phosphatase activity of the soil in the rhizosphere of sugar beet root crops was found to be 15-38% ($P > 0.95$) in comparison with control one. When co-inoculated with Polymycobacterin and Agrofil, the soil phosphatase activity in the root crop rotation was increased by 21-46% ($P > 0.95$) with a significant trend increase in phosphatase activity during vegetation in both experimental variants (Fig. 1, Fig. 2).