

## INTERNATIONAL BIOLOGICAL, AGRICULTURAL AND LIFE SCIENCE CONGRESS POSTER LIST

#	Title of Submission	Topics	Contact Author	All Authors
<b>DAY 1 07.11.2019</b>				
1	Determination of Phenological and Genetic Differences in Genotypes Obtained from Free Pollinated Seeds in Sütyemez-1 Walnut Cultivar	Agriculture	Şakir Burak Bükücü	Esra Yildirim, Mehmet Sütyemez, Şakir Burak Bükücü, Akide Özcan
2	Response of <i>T. aestivum</i> L Cultivars to Nutrition with Organic Fertilizers in Long-Term Low-Input Cropping System of Haplic Chernozems II Effect of The Organic Fertilization on The Bread Making Flour Properties Determined by Albumen-Protein Complex	Agriculture	Margarita Nankova	Sonya Doneva, Margarita Nankova, Iliya Iliev, Stefan Krustev
3	Role of Post-Harvest Residue Treatment on The Wheat Productivity, Flour Properties and Bread-Making Qualities	Agriculture	Margarita Nankova	Iliya Iliev, Sonya Doneva, Margarita Nankova
4	Response of <i>T. aestivum</i> L Cultivars to Nutrition with Organic Fertilizers in Long-Term Low-Input Cropping System of Haplic Chernozems I Organic Fertilization and Its Effect on Chemical Composition and Physical Properties of Grain and Wheat Productivity	Agriculture	Margarita Nankova	Margarita Nankova, Sonya Doneva, Iliya Iliev, Stefan Krustev
5	Distribution of The Chromosomal Translocation 1BL/1RS And the Allelic Combinations 7+9/J And 7+8/J in A Set of Dihaploid Lines of Common Wheat	Agriculture	Iliya Iliev	Sonya Doneva, Iliya Iliev, Margarita Nankova, Ivan Todorov
6	Investigation of The Complex Influence of High- And Low-Molecular Glutenins And Crude Protein on The Quality of Bread Wheat ( <i>T. aestivum</i> L)	Agriculture	Iliya Iliev	Sonya Doneva, Margarita Nankova, Iliya Iliev
7	Genetic Diversity of Cereal Storage Proteins in Hexaploid Triticale Varieties from Different Origin	Agriculture	Iliya Iliev	Sonya Doneva, Hristo Stoyanov, Nikolay Neykov, Iliya Iliev, Margarita Nankova
8	Antifungal Activity of <i>Mentha rotundifolia</i> Essential Oil Against <i>Fusarium oxysporum</i>	Agriculture	Leblalta Amina	Leblalta Amina, Harzallah Daoud, Cherrad Semcheddine, Ibrahim Demirtas
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10	High-Yielding Triticale Lines with High Resistance to Powdery Mildew and Stem Rust	Agriculture	Yordanka Stanoeva	Yordanka Stanoeva, Hristo Stoyanov

11	Nematodes Resistance in Plants	Agriculture	Tohid Behmand	Tohid Behmand, Atilla Öcal, Lerzan Öztürk, Ibrahim Halil Elekcioglu
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13	Wheat Genotype Reactions on The Yellow Rust (YR) ( <i>Puccinia striiformis</i> , Wes) Infection Degree in Latvia	Agriculture	Vija Strazdina	Vija Strazdina, Valentina Fetere
14	Molecular Characterisation and Phylogeny of <i>Longidorus elongatus</i> from Northwestern Marmara Region, Turkey	Agriculture	Lerzan Öztürk	Lerzan Öztürk, Tohid Behmand, Atilla Öcal, Ibrahim Halil Elekcioglu
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20	The effect on Bioactive Compounds of MAP Application During Cold Storage in Jujube Fruit	Agriculture	Ali Islam	Ali Islam, Burhan Öztürk
21	Generation of RNAseq Data for <i>Corylus evellana L</i>	Agriculture	Nehir Ozdemir Ozgenturk	Nehir Ozdemir Ozgenturk, Zehra Omeroglu Ulu, Aysun Akar, Salih Ulu
22	Resolving of Certain Conserved miRNA in <i>Olea europaea</i>	Agriculture	Nehir Ozdemir Ozgenturk	Nehir Ozdemir Ozgenturk, Hatice Nur Aydin, Sultan Cansu Ilgin
23	Forest Vitality - Icp Sample Plots Leveli And Ii - With Special Emphasis on Abiotic Agents (Ice Brakes) In Republic of Serbia For Period 2014-2019	Forestry	Renata Gagić-Serdar	Renata Gagić-Serdar, Tomislav Stefanović, Goran Češljar, Miroslava Marković, Ivana Živanović
24	Effect of Incorporating an Agro-Industrial Byproduct of Citrus Pulp into The Broiler Diet	Animal Science	Arbouche Yasmine	Arbouche Yasmine, Mennani Achour, Arbouche Rafik, Arbouche Fodil, Arbouche Halima Saadia
25	Impact of The Incorporation of Vegetable Oils into The Feed on The Performance of Broilers: Case of Soybean Oil	Animal Science	Mennani Achour	Mennani Achour, Arbouche Yasmine, Arbouche Rafik, Boucetta Sami
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29	Empathy and Pro-Social Behavior in Rats	Biology	Lalazar Nazarova	Lalazar Nazarova, Aytac Ahmadzada
30	Biochemical Plant Protective Responses of Cereals Under the Action of Biotic and Abiotic Factors	Biology	Olga Molodchenkova	Olga Molodchenkova, Olga Ryshchakov A, Jaroslav Fanin
31	Bacterial Degradation of Paper Pulp Wastewater	Biology	Aysegul Ozer	Aysegul Ozer, Fulya Ay Sal, Ali Osman Belduz, Sabriye Canakci
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35	Decolorization of RBBR and Congo Red by Bacteria	Biology	Fulya Ay Sal	Fulya Ay Sal, Aysegul Ozer, Sabriye Canakci, Ali Osman Belduz
36	Screening of Ligninolytic Bacteria and Application to Black Liquor	Biology	Fulya Ay Sal	Fulya Ay Sal, Aysegul Ozer, Sabriye Canakci, Ali Osman Belduz
37	Biochemical Characterization of Extracellular Lipase from A New Strain Bacillus Sp FAD9	Biology	Fulya Ay Sal	Fulya Ay Sal, Aysegul Ozer, Sabriye Canakci, Ali Osman Belduz
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40	Acute Toxicity of Low Dose Diazinon Pupa Stage of Rose Tortrix <i>Archips rosana</i> (Linnaeus, 1758) (Lepidoptera: Tortricidae)	Biology	Utku Güner	Utku Güner, Mitat Aydoğdu, Fulya Dilek Gökalp
41	Effective concentrations of Diazinon on Larval stage of <i>Archips rosana</i> (Linnaeus, 1758) (Lepidoptera: Tortricidae)	Biology	Fulya Dilek Gökalp	Fulya Dilek Gökalp, Utku Güner, Mitat Aydoğdu
42	Determination of LC50 Concentration of Diazinon on <i>Archips rosana</i> (Linnaeus, 1758) (Lepidoptera: Tortricidae) Adults	Biology	Mitat Aydoğdu	Mitat Aydoğdu, Fulya Dilek Gökalp, Utku Güner
43	Citizen Science in Croatia: "Where Did the Sea Urchins Disappear?" Campaign Case Study	Biology	Danijela Poljuha	Danijela Poljuha, Mirela Uzelac, Tim Weber, Barbara Sladonja
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45	Effects of Dimethyl Sulfoxide on The Hemocyte Content of Galleria mellonella	Biology	Bülent Gündüz	Emine Inci Balkan, Serhat Kaya, Bülent Gündüz
46	Effects of Different Concentrations of Dimethyl Sulfoxide on Galleria mellonella hemolymph Phenol Oxidase Activity	Biology	Seranay Türkdoğan	Serhat Kaya, Seranay Türkdoğan, Bülent Gündüz
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49	Effects of Hypericum perforatum on Hemocyte Count of Galleria mellonella	Biology	Çağla Çakaloğlu	Çağla Çakaloğlu, Emine Inci Balkan, Bülent Gündüz
50	The Effects of Salvia Officinalis Extract on Galleria Mellonella phenoloxidase Activity	Biology	Bülent Gündüz	Gülsüm Akkuş, Serhat Kaya, Bülent Gündüz
51	A Potentially Toxic Algal Bloom of Euglena sanguinea Ehrenberg in a Mediterranean Creek (Antalya, Turkey)	Biology	F Banu Yalim	F. Banu Yalim, Özgür Baytut, Özgür Aktaş, Talip Özgen
52	Preparation of Poly (N-[Tris(hyoxymethyl) methyl]acrylamide-co-1-vinyl imidazole-co-EGDMA) (THMMA-co-VIM-co-EGDMA) Based Hyogel For Removal of Boron From Aqueous Solutions	Chemistry	Bahire Filiz Şenkal	Bahire Filiz Şenkal, Sare Naz Çiftçi, Ebru Tekneci, Erdem Yavuz
53	Synthesis and Characterization of New Urethane Based Hyogen-Bonded Liquid Crystalline Compound	Chemistry	Burak Korkmaz	Burak Korkmaz, Bahire Filiz Şenkal, Yeşim Gürsel, Mustafa Okutan
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56	Methylene blue physicochemical characterization and adsorption by clay Montmorillonite (Maghnia city): Environmental application	Chemistry	Belal Saliha	Belal Saliha, Benaissa Kheira, Benaissa Kheira
57	Enhancing of Biogas Production with Carbon or Metal Based Materials	Environmental Science	Sevgi Demirel	Sevgi Demirel, Hamdi Muratçobanoğlu, Ö Begüm Gökçek
58	Noble Metal Nanoparticles: Emerging Threat to Plants	Environmental Science	Jakub Siegel	Jakub Siegel, Angelini Jindřiška, Ruslan Klassen, Olga Valentová, Václav Švorčík
59	Wounds Healing Activity of Galium tunetanum Poiret Extract Ointment	Pharmaceutical Sciences	Harzallah Daoud	Harzallah Daoud, Gaamoune Sofiane, Leblalta Amina
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63	Mechanical characteristics of apples to impact loads	Life Science	Zbigniew Stropek	Zbigniew Stropek
64	Anti-Influenza Virus Activity of The Methanol Extract from Succulent Plant <i>Graptopetalum paraguayense</i> E Walther	Life Science	Ilian Badjakov	Ivayla Dincheva, Ilian Badjakov, Petia Genova-Kalou, Nadezhda Markova, Venelin Enchev
65	DNA Profiling of <i>Leucojum aestivum</i> (Summer Snowflake) and <i>Narcissus confusus</i> L by RAPD and AFLP markers	Life Science	Ilian Badjakov	Ilian Badjakov, Ivayla Dincheva, Jaume Bastida, Violeta Kondakova, Carles Codina
66	Gaining Consciousness of Agricultural Production at an Early Age	Life Science	Hülya Çulhaoğlu Imrak	Hülya Çulhaoğlu Imrak, Derya Kaya, Zeynep Yalçın
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71	Galium setaceum Lam. and Sisyrinchium rosulatum E. P. Bicknell, two new species for Albanian Flora, distribution and ecology	Plant Science	Ermelinda Gjeta	Ermelinda Gjeta - Jonathan Titus - Priscilla Titus
72	Bioinformatic And Molecular-Genetic Research of Chickpea Herbicide Resistance Genes	Biotechnology	Nataliia Volkova	Nataliia Volkova, Aryna Korchmarova, Anna Kryvenko, Olga Zakharova, Vyacheslav Sychkar
73	Induced Mutation in Bread Wheat ( <i>Triticum aestivum</i> L) Genotypes for Improve Yield Component and Quality Parameters	Biotechnology	Irfan Öztürk	Irfan Öztürk, Ayşe Şen
74	Characterization of Alkaline and Thermophile Protease Enzyme Produced from <i>Bacillus</i> sp SB-23 Strain Isolated from Salt Lake Turkey	Biotechnology	Süreyya Kocamaz	Süreyya Kocamaz, Selma Gürz, Burhan Arikan
75	Antiviral Effects of <i>Rubus idaeus</i> L and <i>Plantago major</i> L Leaf extracts Against Herpes Simplex Virus Type 1 and Adenovirus 5 in vitro	Bioscience	Dariia Yefanova	Svetlana Zagorodnya, Dariia Yefanova
76	Comparative Analysis of Fatty Acids Composition Between Grass and	Bioscience	Mila Arapcheska	Mila Arapcheska, Jovanka Tuteska,

				Zehra Hajrulai - Musliu, Risto Uzunov
77	Health Benefits of Conjugated Linoleic Acid	Bioscience	Mila Arapcheska	Mila Arapcheska, Jovanka Tuteska, Zehra Hajrulai - Musliu, Risto Uzunov
78	Green Tea Effects on Mitochondrial Activity of Virus-iated Cells and in vitro RNA and DNA Syntheses	Bioscience	Yelyzaveta Danylenko	Svetlana Zagorodnya, Kristina Naumenko, Tatyana Shyryna, Larisa Palchykovska, Yelyzaveta Danylenko
79	Antiviral effects of Ruby's diarist L. and Plantago major L. leaf extracts against Herpes Simplex Virus type 1 and Adenovirus 5 in vitro	Bioscience	Yefanova Dariia	Yefanova D., Zagorodnya S., Palchykivska L., Likhanov A., Shyryna T., Dorovskikh A.
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82	Amino Acid Profiles of White Wines from Three Autochthonous Galician Varieties	Food Science	Elena Falqué-López	José M Mirás-Avalos, Yolanda Bouzas-Cid, Emiliano Trigo-Córdoba, Ignacio Orriols-Fernández, Elena Falqué-López
83	Colour Changes in Different Oils Used in a Canned Eel	Food Science	Sidonia Martínez Suárez	Lucía Gómez-Limia, Inmaculada Franco, Hiar Villar, Sidonia Martínez Suárez
84	Effects of Processing Techniques and Storage on Oxidative Stability of Different Oils in A Canned Eel	Food Science	Lucía Gómez Limia	Lucía Gómez Limia, Inmaculada Franco, Hiar Villar, Sidonia Martínez Suárez
85	Quality Characteristics of Beef Sausage Containing Dates During Ripening	Food Science	Inmaculada Franco	Inmaculada Franco, Sihem Latrach, Lucia Gómez-Limia, Sidonia Martínez Suárez
86	Antioxidant Activity, Total Phenolic and Flavonoid Contents and Antineuro degenerative Activity of Methanol Extract of Pyrus Varieties Fruit from Serbia	Food Science	Aleksana Savic	Aleksana Savic, Ana Alimpić Aradski, Sonja Duletić-Laušević
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88	The expression of some dehydrin genes in drought-stressed sunflower genotypes	Plant Science	<u>Steliana Clapco</u>	Maria Duca - <u>Steliana Clapco</u> - Angela Port - Olesea Tabara - Ana Mutu



## Anti-influenza virus activity of the methanol extract from succulent plant *Graptopetalum paraguayense* E. Walther

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**Introduction:** Influenza virus infection is one of the most common worldwide and causing significant morbidity and mortality. Currently, the treatment of influenza viruses based on four inhibitors: two neuraminidase (oseltamivir and zanamivir) and two M2 ion-channel blockers (amantadine and remantadine). However, the administration of these drugs often leads to the side effects, toxicity and antiviral resistance. Therefore, the development of novel anti-influenza pharmaceuticals to prevent and control future influenza epidemics is necessary. Medicinal plant extracts have proved to be a rich source of candidate compounds for the development of new therapeutically agents with anti-influenza virus activity.

**Aim:** The aim of the present study was to evaluate *in vitro* the anti-influenza virus activity of methanol extract of succulent plant *Graptopetalum paraguayense* E. Walther (GP) and three main fraction A (lipids), B (amino and organic acids, carbohydrates) and C (phenolic acids).

**Materials and Methods:** Methanol extract from leaves of GP was obtained by standard method. The composition of each fraction was determined by GC-MS analysis. The antiviral effect and cytotoxicity were investigated on MDCK SIAT cells, which were infected with two human influenza virus strains: A/Puerto Rico/8/34 (H1N1) and B/Yamagata/16/88. To evaluate the anti-influenza activity after virus infection *in vitro* we performed the following post treatment assays: MTT-test, virus-induced cytopathic effect (CPE) and hemagglutination inhibition test (HI). The results were expressed as 50% inhibitory concentration of the viral effect (IC<sub>50</sub>). Oseltamivir phosphate (with trade name Tamiflu<sup>®</sup>) was used as positive control.

**Results:** All tested fractions and total GP extract exhibited low cytotoxic effect *in vitro*. The results were dose-dependent. The fraction C and methanol GP extract significantly inhibited H1N1 virus replication on MDCK SIAT cells in concentration range 0.001 – 1 mg/mL, when compared to the positive control. GP extract applied in maximal nontoxic concentration (0.01 mg/mL) reduced viral yield by  $\Delta\log_{10} 1$ , which IC<sub>50</sub> was 10 times lower (0.1 mg/mL). Using representative strains of influenza virus it was shown that apparently the inhibitory effect was strain-specific. The phenolic fraction C effectively suppressed the replication of influenza virus type A by 87.3%, compared with antiviral drug Tamiflu<sup>®</sup>, which protects infected MDCK SIAT cells almost 95%.

**Conclusions:** This is the first report on the anti-influenza virus activity of the total extract and fractions isolated from *Graptopetalum paraguayense* E. Walther. The results of this study shed light that fraction C and total GP extract could be promising inhibitors of influenza A virus. Therefore, characterization of the plant's active compounds and investigation of the mechanism of antiviral action are suggested.

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**Key words:** *Graptopetalum paraguayense* E. Walther, phenolic fraction, influenza virus type A and type B, anti-influenza virus activity, cytotoxicity