

Preliminary program

of the 1st International Applied Scientific Conference **Medicinal, Aromatic and Edible Plants (MAEPs) and their by-products: Utilization and valorization for a sustainable and circular economy - MAEP&WASTE 2020**

Wednesday September 08 2021

Arrival and accommodation

Thursday September 09 2021 – Grand Hotel Plovdiv

08:00-11:00 – registration (lobby at the hotel)

09:00-09:30 – opening of the conference – Welcome address:

RECTOR of UFT – 10 min

BNAEOPC representative – 10 min

Organizers welcome – 10 min

Moderator – Associate Professor PhD Anton Slavov

09:30-10:15 – **plenary lecture: Kemal Husnu Can Baser** – Turkey as a source for medicinal and aromatic plants. *Near East University, Faculty of Pharmacy, Department of Pharmacognosy, Nicosia, N. Cyprus*

10:15-11:00 – **plenary lecture: Fabian Weber** – Valorization of press residues from the juice and wine industry. *Rheinische Friedrich-Wilhelms University of Bonn, Institute of Nutritional and Food Sciences, Molecular Food Technology, 19b Endenicher Str., Bonn 53115, Germany*

11:00-11:30 – coffee break (posters could be placed)

11:30-11:45 – short presentation: Nicole Parapanova, Sofia Dimova, Ivelina Koicheva, Kuril Simitchiev¹, Ginka Antova², Galya Toncheva³ – ICP-MS and MP-AES investigation of the essential and trace element content in green and red algae from coastal waters of the Bulgarian Black Sea area. ¹*Department of Analytical Chemistry and Computer Chemistry, University of Plovdiv, 24 Tsar Assen St., 4000 Plovdiv, Bulgaria;* ²*Department of Chemical Technology, University of Plovdiv, 24 Tsar Assen St., 4000 Plovdiv, Bulgaria;* ³*Department of General and Inorganic Chemistry, University of Plovdiv, 24 Tsar Assen St., 4000 Plovdiv, Bulgaria*

11:45-12:00 – short presentation: Biliana Georgieva¹, Daniela Karashanova¹, Radoslav Angelov¹, Ivelina Vasileva², Totka Dodevska², Anton Slavov² – TEM analysis on morphology and phase composition of silver nanoparticles, obtained by a “green” method. ¹*Institute of Optical Materials and Technologies “Acad. J. Malinowski”, Bulgarian Academy of Sciences, Acad. G. Bonchev Str., Bl. 109, 1113 Sofia, Bulgaria;* ²*Department of Organic Chemistry and Inorganic Chemistry, Technological Faculty, University of Food Technologies, 26 Maritsa Blvd., Plovdiv 4000, Bulgaria*

12:00-12:15 – short presentation: Tzvetelina Zagorcheva, Krasimir Rusanov, Ivan Atanasov – Genetic and metabolic diversity of Bulgarian lavender cultivars. *AgroBioInstitute, Agricultural Academy, 8 Dragan Tsankov Blvd., Sofia 1164, Bulgaria*

Sponsor's exhibition

12:15-13:30 – lunch

Moderator – Associate Professor DSc Kiril Mihalev

13:30-14:15 – **plenary lecture: Angela M. Fraser** – Prevalence of human noroviruses in U.S. foodservice establishments: The importance of environmental sanitation. *Clemson University, Department of Food, Nutrition and Packaging Sciences, Clemson, SC 29634, 206 Poole Agriculture Center, USA*

14:15-14:30 - short presentation: Anna Aladjadjian – ENABLING-project created to help bio-based products development (Waste minimization and valorization of MAEPs processing by-products). *National Biomass Association (BGBIOM), 22 Antim Parvi Str., Plovdiv, Bulgaria*

14:30-14:45- short presentation: Ivan Atanassov, Krasimir Rusanov, Tzvetelina Zagorcheva, Mila Rusanova, Marina Alexeeva, Romyana Velcheva – Current experience and research directions in AgroBioInstitute, related to sustainable utilization of bio-resources of medicinal and aromatic plants and valorization of agro-industry wastes and by-products. *Agrobiointitute, Agricultural Academy, 8 Dragan Tsankov Blvd., Sofia, Bulgaria*

14:45-15:00- short presentation: Krasimir Rusanov¹, Ivan Atanassov¹, Natasha Kovacheva² – Essential oil roses – current status of genomics and metabolomics studies with capacity for practical application. ¹*Agrobiointitute, Agricultural Academy, 8 Dragan Tsankov Blvd., Sofia;* ²*Rosa Select Ltd., Bulgaria*

15:00-15:30 – coffee break (posters could be placed)

15:30-15:45 – short presentation: Hristo Kalaydzhev¹, Radoslav Georgiev¹, Petya Ivanova¹, Magdalena Stoyanova², Cristina L. M. Silva³, Vesela Chalova¹ – Enhanced solubility of rapeseed meal protein isolates prepared by sequential isoelectric focusing. ¹*Department of Biochemistry and Molecular Biology, University of Food Technologies;* ²*Department of Analytical Chemistry and Physicochemistry, University of Food Technologies, 26 Maritza Blvd., 4002 Plovdiv, Bulgaria;* ³*Universidade Católica Portuguesa, CBQF - Centro de Biotecnologia e Química Fina – Laboratório Associado, Escola Superior de Biotecnologia, Rua Diogo Botelho 1327, 4169-005 Porto, Portugal*

15:45-16:00 – short presentation: Hulya Dogan¹, Tansu Uskutoglu², Hafize Fidan³, Belgin Cosge Senkal², Hatice Bas⁴, Albena Stoyanova⁵ – Production and trade of medicinal aromatic plants in Turkey. ¹*Department of Plant and Animal Production, Vocational School of Technical Sciences;* ²*Department of Field crops, Faculty of Agriculture;* ⁴*Department of Biology, Faculty of Science and Letters, Yozgat Bozok University, Yozgat, 66100, Turkey;* ³*Department of Nutrition and Tourism;* ⁵*Department of Tobacco, Sugar, Vegetable and Essential oils Technology, 26 Maritza Blvd., Plovdiv, Bulgaria*

16:00-16:15 – short presentation: Belgin Cosge Senkal¹, Tansu Uskutoglu¹, Hafize Fidan², Hulya Dogan⁴, Albena Stoyanova³ – Essential oil composition and heavy metal content of *Salvia aethiopsis* L. from Turkey. ¹*Department of Field crops, Faculty of Agriculture, Yozgat Bozok University, 66900, Yozgat, Turkey;* ²*Department of Nutrition and Tourism, University of Food Technologies, 26 Maritza Blvd., Plovdiv, Bulgaria;* ³*Department of Tobacco, Sugar, Vegetable and Essential oils Technology, 26 Maritza Blvd., Plovdiv, Bulgaria;* ⁴*Department of Plant and Animal Production, Vocational School of Technical Sciences, Yozgat Bozok University, 66200, Yozgat, Turkey*

16:15-16:30 – short presentation: Milena Dimitrova, Ivelina Ivanova, Galin Ivanov, Kiril Mihalev – Influence of the polyphenol extract from rose (*Rosa damascena* Mill.) petals on the growth and activity of probiotic bacteria in yogurt. *University of Food Technologies, Technological Faculty, Department of Milk and Dairy Products Technology, Department of Analytical Chemistry, Department of Food Preservation and Refrigeration Technology, 26 Maritza Blvd. BG 4000 Plovdiv, Bulgaria*

16:30-18:00 – poster session

19:30 – Diner – at **Grand Hotel Plovdiv** restaurant

Sponsor's exhibition

08:00-11:00 – registration (lobby at the hotel)

Moderator – Professor DSc Atanas Pavlov

09:00-09:15 – short presentation: Anton Slavov¹, Hristo Spasov², Petko Denev³, Ivelina Vasileva¹, Rada Dinkova⁴, Ivan Bakardjiiski², Ivaila Bajlekova², Nikoleta Yantcheva¹ – Obtaining of new aromatized wines with added rose-oil industry wastes. ¹Department of Organic and Inorganic Chemistry, ²Department of Wine and Beer Technology, ⁴Department of Food Preservation and Refrigeration Technology, University of Food Technologies, 26 Maritsa Blvd., Plovdiv 4000, Bulgaria; Bulgarian Academy of Sciences, Institute of Organic Chemistry with Center of Phytochemistry, Akad. Georgi Bonchev Str., building 9, Sofia, Bulgaria

09:15-09:30 – short presentation: David Lewis – Advances in minimal processing of high acid and low acid ingredients and products for food, cosmetic and medical applications. Foodstream Pty Ltd., ABN 56 117 205 311, PO Box 767, Mount Ommaney QLD 4074, Australia

09:30-10:00 – **plenary lecture: Liudmil Antonov**, Daniela Nedeltcheva, Vera Deneva, Kamelia Gechovska, Viktor Markuliev, Ivan Bakardzhiyski, Krasimir Bambalov, Diana Tsobanova, Valentin Bambalov – Big abilities of small instruments: portable NIR and Raman spectroscopy in analysis of wine and natural products. Bulgarian Academy of Sciences, Institute of Organic Chemistry with Center of Phytochemistry, Akad. Georgi Bonchev Str., building 9, Sofia, Bulgaria

10:00-10:15 – short presentation: Stefan Dragoev, Desislav Balev, Desislava Vlahova-Vangelova, Nikolay Kolev, Kamelia Dimova – Improving the meat quality by feed supplementation with distilled rose petals. Department of Meat and Fish Technology, University of Food Technologies, 26 Maritsa Blvd., Plovdiv 4000, Bulgaria

10:15-10:30 – short presentation: Salih Aksay, Ayşegül Güleç – Determination of pectin methylesterase activity of pickly pear (*Opuntia ficus-indica* L.) fruit and its kinetic parameters. Mersin University, Department of Food Engineering, 33343 Mersin, TURKEY

10:30-10:45 – short presentation: Nenko Nenov – Advanced methods for extraction of valuable compounds from plants and their wastes–liquefied gas and superheated water extraction. Innosolv Ltd. – Plovdiv, Bulgaria

10:45-11:30 – coffee break

11:30-11:45 – short presentation: Zhana Petkova, Ginka Antova, Maria Angelova-Romova – Fat-soluble biologically active components and physico-chemical characteristics of lupin seed oil (*Lupinus angustifolius* L. cultivar ‘Boregine’), Department of Chemical Technology, University of Plovdiv ‘Paisii Hilendarski’ 24 Tzar Asen Str., 4000 Plovdiv, Bulgaria

11:45-12:00 – short presentation: Rada Dinkova¹, Fabian Weber², Vasil Shikov¹, Alexios Vardakas¹, Maike Passon², Andreas Schieber², Kiril Mihalev¹ – Polyphenols from plant by-products and their role in fruit processing. ¹Department of Food Preservation and Refrigeration Technology, University of Food Technologies, 26 Maritsa Blvd., Plovdiv 4000, Bulgaria; ²Department of Nutritional and Food Sciences, Molecular Food Technology, University of Bonn, Germany

12:00-12:15 – short presentation: Selin Erdem¹, Hüseyin Servi², Cansu Vatansever³ – Antibacterial activities of *Coriandrum sativum* and *Pimpinella anisum* seed extracts and essential oils. ¹Altınbaş University Faculty of Pharmacy; ²Altınbaş University Faculty of Pharmacy Department of Pharmaceutical Botany; ³Altınbaş University Faculty of Pharmacy Department of Pharmaceutical Microbiology, Turkey

12:15-13:30 – lunch

<p>Moderator – Associate Professor PhD Anton Slavov</p> <p>13:30-13:45 – short presentation: <u>Nikoleta Yantcheva</u>, Ivelina Vasileva, Anton Slavov – Obtaining and characterization of water and water-ethanolic extracts from industrial rose wastes. <i>Department of Organic and Inorganic Chemistry, University of Food Technologies, 26 Maritsa Blvd., Plovdiv 4000, Bulgaria</i></p> <p>13:45-14:00 – short presentation: Zapryana Denkova¹, <u>Rositsa Denkova-Kostova</u>², Ivelina Vasileva³, Anton Slavov³ – Antimicrobial activity of plant extracts of rose by-products from the essential oil industry against saprophytic and pathogenic microorganisms. ¹<i>Department of Microbiology</i>, ²<i>Department of Biochemistry and Molecular Biology</i>, ³<i>Department of Organic chemistry and Inorganic chemistry, University of Food Technologies, 26 Maritsa Blvd., Plovdiv 4000, Plovdiv, Bulgaria</i></p> <p>14:00-14:15 – short presentation: <u>Ivelina Vasileva</u>, Rosen Chochkov, Anton Slavov – Possibilities for application of rose oil waste (<i>Rosa damascena</i> Mill) in muffins. <i>Department of Organic and Inorganic Chemistry, University of Food Technologies, 26 Maritsa Blvd., Plovdiv 4000, Bulgaria</i></p> <p>14:15-14:30 – short presentation: <u>Rosen Chochkov</u>¹, Ivelina Vasileva¹, Anton Slavov¹, Dimitar Penkov² – Effect of rose waste (<i>Rosa damascena</i> Mill) in quality characteristic of sweet baked bun. ¹<i>University of Food Technology, 26 Maritsa Blvd., Plovdiv 4000, Bulgaria</i>, ²<i>Medical University – Plovdiv, Bulgaria</i></p> <p>14:30-14:45 – short presentation: Coralie Dupas¹, <u>Benjamin Métoyer</u>¹, Halima El Hatmi², Isabelle Adt¹, Samir A. Mahgoub³, Emilie Dumas¹ – What plants could enhance raw milk cheese preservation? ¹<i>Univ Lyon 1, Université Claude Bernard Lyon 1, ISARA Lyon, BioDyMIA - Equipe Mixte d'Accueil n°3733, rue Henri de Boissieu, F-01000 Bourg en Bresse, France</i>; ²<i>Institut des Régions Arides (IRA), Km 22.5, route du Djorf, 4119 Medenine, Tunisia</i>; ³<i>Department of Agricultural Microbiology, Faculty of Agriculture, Zagazig University, 44511, Egypt</i></p> <p>14:45-15:15 – coffee break and poster session</p> <p>15:15-15:30 – Closing ceremony and poster session awards</p>	
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Saturday September 11 2021

Sightseeing

Poster presentations

PP1. Anna Aladjadjian¹, Anton Slavov², ¹*National Biomass Association (BGBIOM), 22 Antim Parvi Str., Plovdiv 4000, Bulgaria;* ²*Department of Organic Chemistry and Inorganic Chemistry, University of Food Technologies, 26 Maritsa Blvd., Plovdiv 4000, Bulgaria* – **FUR4Sustain – COST Action for chemicals from biorefineries.**

PP2. Hafize N. Fidan¹, Salam Ibrahim², Angela Fraser³, Stanko Stankov¹, ¹*University of Food Technologies, Department of Catering and Tourism, 26 Maritsa Blvd, Plovdiv 4000, Bulgaria;* ²*North Carolina A & T State University Greensboro, NC 227411-1064, Food Microbiology and Biotechnology Laboratory 171 Carver Hall College of Agriculture and Environmental Sciences, USA;* ³*Clemson University, Department of Food, Nutrition and Packaging Sciences, Clemson, SC 29634, 206 Poole Agriculture Center, USA* – **Knowledge, attitudes and food safety practices of food handlers in catering establishments in Plovdiv, Bulgaria.**

PP3. Ana Dobрева¹, Ivayla Dincheva², Nenko Nenov³, Antoaneta Trendafilova⁴, ¹*Institute for Roses and Aromatic Plants, Agriculture Academy, Kazanlak, Bulgaria;* ²*AgroBioInstitute, Agriculture Academy, Sofia, Bulgaria;* ³*University of Food Technologies, Plovdiv, Bulgaria;* ⁴*Institute of Organic Chemistry with Centre of Phytochemistry, Bulgarian Academy of Sciences, Sofia, Bulgaria* – **Chemical characterization of *Artemisia annua* L. subcritical extract.**

PP4. Milena Nikolova¹, Ana Dobрева², Strahil Berkov¹, ¹*Department of Applied Botany, Institute of Botany, Bulgarian Academy of Sciences, Sofia, Bulgaria;* ²*Institute for Roses and Aromatic Plants, Agriculture Academy, Kazanlak, Bulgaria* – **GC-MS based metabolite profiling and free radical scavenging activity of *Helichrysum italicum* (roth) g. Don. wastes after distillation.**

PP5. Venelina Popova¹, Velizar Gochev², Albena Stoyanova¹, ¹*Department of Tobacco, Sugar, Vegetable and Essential Oils, University of Food Technologies, 26 Maritza Blvd., 4002 Plovdiv, Bulgaria;* ²*Department of Microbiology, University of Plovdiv “Paisii Hilendarski”, 24 Tsar Asen Str., 4000 Plovdiv, Bulgaria* – **Bulgarian contribution to the investigation of natural aromatic products: A brief retrospective review.**

PP6. Yanna Lazarova, Totka Dodevska, Anton Slavov, *Department of Organic Chemistry and Inorganic Chemistry, University of Food Technologies, 26 Maritsa Blvd., Plovdiv 4000, Bulgaria* – **Biosynthesis and potential applications of silver and gold nanoparticles in electroanalysis.**

PP7. Alexios Vardakas¹, Vasil Shikov¹, Nenko Nenov², Kiril Mihalev¹, ¹*Department of Food Preservation and Refrigeration Technology,* ²*Department of Industrial Thermal Engineering, University of Food Technologies, 26 Maritsa Blvd., Plovdiv 4000, Bulgaria* – **A novel process for enzyme-assisted subcritical water extraction of rice husk polyphenols.**

PP8. Petia Ivanova¹, Ivelina Vasileva², Albena Parzhanova³, Vesela Chalova¹, Anton Slavov², Snezhana Ivanova³, ¹*Department of Catering and Tourism, Department of Organic Chemistry and Inorganic Chemistry, University of Food Technologies, 26 Maritsa Blvd., Plovdiv 4000, Bulgaria* – **Factors affecting the amount of biologically active substances in extracts of plants typical of western Rhodopes.**

PP9. Stefan Dragoev, Desislav Balev, Desislava Vlahova-Vangelova, Nikolay Kolev, Kamelia Dimova, *Department Meat and Fish Technology, University of Food Technologies, 26 Maritza Blvd., Plovdiv 4000, Bulgaria* – **Application of distilled rose petals extract in meat matrix.**

PP10. Nadezhda Petkova¹, Mima Todorova², Neli Grozeva², Mariya Gerdzhikova²,
¹University of Food Technologies, Department of Organic Chemistry and Inorganic Chemistry, 26 Maritza Blvd., Plovdiv 4002, Bulgaria, ²Trakia University, Faculty of Agriculture, Stara Zagora 6000, Bulgaria – **A comparison of total phenols content and antioxidant activity in the extracts from rose petals (*Rosa damascena* Mill.) grown under organic and conventional systems.**

PP11. Milena Tzanova¹, Ana Dobрева², Maria Gerdzhikova¹, Zvezdelina Yaneva³, Donika Ivanova³, Vasil Atanasov¹, ¹Faculty of Agriculture, Trakia University, Stara Zagora, Bulgaria, ²Institute for Roses, Aromatic and Medicinal Plants, Kazanlak, Bulgaria, ³Faculty of Veterinary Medicine, Trakia University, Stara Zagora, Bulgaria – **Preliminary study on quantification of some flavonoids in *Rosa alba* L. and *Rosa damascena* Mill. cultivated in Thracian valley.**

PP12. Ivan Ivanov¹, Radka Vrancheva², Ivayla Dincheva³, Ilian Badjakov³, Atanas Pavlov^{2,4},
¹Department of Organic Chemistry and Inorganic Chemistry, University of Food Technologies-Plovdiv, 26 Maritza Blvd., 4002, Plovdiv, Bulgaria, ²Department of Analytical Chemistry and Physical chemistry, University of Food Technologies-Plovdiv, 26 Maritza Blvd., 4002, Plovdiv, Bulgaria, ³AgroBioInstitute, Agricultural Academy, 8 Dragan Tsankov Blvd, 1164, Sofia, Bulgaria, ⁴Laboratory of Applied Biotechnologies, The Stephan Angeloff Institute of Microbiology, Bulgarian Academy of Sciences, 139 Ruski Blvd, 4000 Plovdiv, Bulgaria – **Investigation of blueberry cultivars (*Vaccinium corymbosum* L. var. Bluegold, var. Bluecrop and var. Elliott) and wild blueberry (*Vaccinium uliginosum* L.) grown in Bulgaria as potential sources of pentacyclic triterpenes.**

PP13. Radka Vrancheva¹, Ivan Ivanov², Ivayla Dincheva³, Ilian Badjakov³, Atanas Pavlov^{1,4},
¹Department of Analytical Chemistry and Physical chemistry, University of Food Technologies-Plovdiv, 26 Maritza Blvd., 4002, Plovdiv, Bulgaria, ²Department of Organic Chemistry and Inorganic Chemistry, University of Food Technologies-Plovdiv, 26 Maritza Blvd., 4002, Plovdiv, Bulgaria, ³AgroBioInstitute, Agricultural Academy, 8 Dragan Tsankov Blvd, 1164, Sofia, Bulgaria, ⁴Laboratory of Applied Biotechnologies, The Stephan Angeloff Institute of Microbiology, Bulgarian Academy of Sciences, 139 Ruski Blvd, 4000 Plovdiv, Bulgaria – **Comparative analysis of triterpenes profiles of leaves of different wild populations of bilberry (*Vaccinium myrtillus* L.) and lingonberry (*Vaccinium vitis-idaea* L.) grown in Bulgaria.**

PP14. Radka Vrancheva¹, Ivan Ivanov², Ivayla Dincheva³, Ilian Badjakov³, Atanas Pavlov^{1,4},
¹Department of Analytical Chemistry and Physical chemistry, University of Food Technologies-Plovdiv, 26 Maritza Blvd., 4002, Plovdiv, Bulgaria, ²Department of Organic Chemistry and Inorganic Chemistry, University of Food Technologies-Plovdiv, 26 Maritza Blvd., 4002, Plovdiv, Bulgaria, ³AgroBioInstitute, Agricultural Academy, 8 Dragan Tsankov Blvd, 1164, Sofia, Bulgaria, ⁴Laboratory of Applied Biotechnologies, The Stephan Angeloff Institute of Microbiology, Bulgarian Academy of Sciences, 139 Ruski Blvd, 4000 Plovdiv, Bulgaria – **GC-MS based analysis of chemical composition of essential oil of different populations of *Satureja montana* L. wild grown in Bulgaria.**

PP15. Yoana Kiselova-Kaneva¹, Diana Ivanova¹, Bogdan Roussev¹, Ayshe Salim¹, Minka Hristova², Milka Nashar¹, ¹Department of Biochemistry, Molecular Medicine and Nutrigenomics, Laboratory of Nutrigenomics and Functional Foods, Medical University – Varna, Bulgaria, ²Department of Physiology and Pathophysiology, Education Section of Pathophysiology, Medical University – Varna – **Modulating complement activity in healthy subjects by *Sambucus ebulus* tea intake.**

PP16. Mila Rusanova¹, Krasimir Rusanov¹, Veronika Butterweck², Ivan Atanassov¹,
¹Agrobiointitute, Agricultural Academy, 8 Dragan Tsankov Blvd, Sofia, Bulgaria, ²Institute of Pharma Technology, University of Applied Sciences and Arts Northwestern Switzerland – **Assessing the capacity of endophytic fungi, indigenous and common yeast strains for biotransformation of phenolics from rose oil distillation wastewater.**

PP17. Marina Alexeeva, Krasimir Rusanov, Ivan Atanassov, Agrobiointitute, Agricultural Academy, 8 Dragan Tsankov Blvd, Sofia, Bulgaria – **Genetic and flower volatile diversity in natural populations of *Origanum vulgare* L. subsp. *hirtum* in Bulgaria.**

PP18. Miluska Cisneros-Yupanqui¹, Anna Lante¹, Petya Ivanova², Albert Krastanov³, Vesela Chalova², ¹*Department of Agronomy, Food, Natural Resources, Animals, and Environment — DAFNAE, Università di Padova, Viale dell'Università, 16, 35020 Legnaro, PD, Italy,* ²*Department of Biochemistry and Molecular Biology, University of Food Technologies, 26 Maritza Blvd., Plovdiv 4002, Bulgaria,* ³*Department of Biotechnology, University of Food Technologies, 26 Maritza Blvd., Plovdiv 4002, Bulgaria* – **Rapeseed meal ethanol-wash powder as a source of bioactive compounds.**

PP19. Latifova Gyuler³, Maria Kaneva¹, Rositsa Denkova-Kostova², Georgi Kostov¹, Vesela Shopska¹, Petar Nedyalkov¹, ¹*Department of Wine and Beer Technology, Technological Faculty, University of Food Technologies, 26 Maritza Blvd., Plovdiv 4002, Bulgaria;* ²*Department of Biochemistry and Molecular Biology, Technological Faculty, University of Food Technologies, 26 Maritza Blvd., Plovdiv 4002, Bulgaria;* ³*A&D Comercial Ltd, Perushtitza, Bulgaria* – **Lactic acid beverage based on wort and mint (*Menta piperita* L.).**

PP20. Yoana Kiselova-Kaneva, Diana Ivanova, Bogdan Roussev, Milka Nashar, *Department of Biochemistry, Molecular Medicine and Nutrigenomics, Laboratory of Nutrigenomics and Functional Foods, Medical University – Varna, Bulgaria* – **Modulating inflammatory cytokine levels – IL-1 β , IL-6, IL-8, TNF- α and CRP in healthy subjects with *Sambucus ebulus* tea intake**

PP21. Gergana Marovska, Ivelina Vasileva, Nikoleta Yantcheva, Anton Slavov, *Department of Organic and Inorganic Chemistry, University of Food Technologies, 26 Maritsa Blvd., Plovdiv 4000, Bulgaria* – **Physico-chemical characteristics of polysaccharides isolated from lavender by-products.**