Abstracts

FOR

5th International Symposium on

Phytochemicals in Medicine and Food

(5-ISPMF)

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	Ethnomedicinal plant utilization of certified folk healers on therapeutic purposes in Buriram Province, Thailand
14:25-14:50	**IL56: Nazim Sekeroglu, Kilis 7 Aralik University, Turkey** Herbal coffees: Healthy & functional beverages
14:50-15:15	**IL57: Ipek Suntar, Gazi University, Turkey** The role of medicinal plants on pseudopregnancy
15:15-15:30	**OL78: Erna Karalija, University of Sarajevo, Bosnia and Herzegovina** Potential of *Salix retusa* as a natural source of catechins in traditional medicine
15:30-15:45	**OL79: José Pinela, Instituto Politécnico de Bragança, Portugal** From wild edible plants to contemporary foods: Nutritional and phytochemical studies with vegetables and spices
15:45-16:00	**OL80: Tuguldur Altangerel, Institute of Traditional Medicine and Technology, Mongolia** Biological activity study of the traditional drug medicine naru-3
16:00-16:15	**OL81: Ramón Marcos Soto-Hernández, Colegio de Posgraduados, México** Metabolites for therapeutic and nutraceutical use in genotypes of Sechium spp.
16:15-16:30	**OL82: João Victor Dutra Gomes, University of Brasilia, Brazil** Brazilian native plants as source of herbal medicines
	Session 24 **Metabolomics analysis** **(Ipek Süntar, Jiaoyan Ren)**
16:50-17:20	**PL13: Mohamed Ali Farag, American University in Cairo, Egypt** Metabolomics gateway for milestone discoveries in the prehistoric and post genomic era
17:20-17:50	**PL14: Jesus Simal-Gandara, University of Vigo, Spain** Metabolomics in understanding food function
17:50-18:15	**IL58: Nokwanda P. Makunga, Stellenbosch University, South Africa** Through the looking glass: exploratory metabolomics of the medicinal South African
18:15-18:40	**IL59: Jian-Lin Wu, Macau University of Science and Technology, Macau, China** Microbiota drive insoluble polysaccharides utilization via microbiome-metabolome interplay during Pu-erh tea fermentation
18:40-18:55	**IL60: Hongshun Yang, National University of Singapore, Singapore** Effect of energy metabolism on the nutritive accumulation during the germination of organic mung bean
18:55-19:10	**OL83: Faridah Abas, Universiti Putra Malaysia, Malaysia** NMR-based metabolomics approach for quality control of selected medicinal plants
19:10-19:25	**OL84: Ahmed Mediani, Universiti Kebangsaan Malaysia, Malaysia** In vitro anticancer activity of some plants used in Algerian traditional medicine and chemical markers of the active plants using metabolomics approach
	Session 25 **Polyphenols and health (II)** **(Niranjan Koirala, Xiumin Chen)**
19:40-20:05	**IL61: Lamuela –Raventós RM, University of Barcelona, Spain** Biomarkers of polyphenols intake
20:05-20:20	**OL85: Ziba Guley, Alanya Alaaddin Keykubat University, Turkey** Dietary polyphenols as potential prebiotics
20:20-20:35	**OL86: Małgorzata Wronkowska, Polish Academy of Sciences, Poland** The glycation inhibitory activity of herbs from the Labiatae family and cookies with their contribution depends on phenolic and flavonoid compounds composition
20:35-20:50	**OL87: Hu Hou, Ocean University of China, China** Non-enzymatic degradation of ready-to-eat sea cucumber and plant polyphenols interventional pathway
20:50-21:05	**OL88: E. Sanmuga Priya, Anna University BIT Campus, India** Antiarthritic potential of hydrolysable tannin fraction isolated from *Terminalia chebula* fruits in collagen induced BALB/c mice
21:05-21:20	**OL89: Goutham V. Ganesh, SRM Institute of Science & Technology, India** PTS alleviates macrophage dysregulation and cellular stress response under hyperglycemic micro-environment with heme
	Session 26: **Natural anti-inflammatory agents** **(José L. Quiles, Jing Wang)**
21:35-22:00	**IL62: Andrea Beltrán-Noboa, Universidad de Las Américas, Ecuador** Chemical and computational analysis for the identification of the anti-inflammatory mechanisms of the traditional plants *Ocimum Basilicum* and *Ocimoum Tenuiflorum*
22:00-22:25	**IL63: Domenico Trombetta, University of Messina, Italy** Targeting intestinal inflammation: betalains vs betalain-rich prickly pear extracts

OL79: From wild edible plants to contemporary foods: Nutritional and phytochemical studies with vegetables and spices

José Pinela*, Carla Pereira, Mikel Añibarro-Ortega, Adriana K. Molina, Custódio Lobo Roriz, Ângela Fernandes, Ana Maria Carvalho, Isabel C.F.R. Ferreira, Lillian Barros
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Wild plants have received high importance at different locations and times of the human history given their ability to provide nutrients and protection[1]. In the Northeastern region of Portugal, a mountainous land with a vast biodiversity and cultural heritage, a large number of edible wild plants have become underutilized over time. This abandonment was mainly due to altered lifestyles of the modern society and massive utilization of a restrict number of crops. However, some wild species are now emerging in gardens and kitchens around Europe and increasingly found in farmers' markets, gourmet food shops, and restaurants[1]. Following this trend, this study aimed to characterize five species traditionally consumed as vegetable (*Montia fontana* L., *Nasturtium officinale* R. Br., and *Rumex induratus* Boiss. & Reut.) or as condiment/infusion (*Pterospartum tridentatum* (L.) Willk and *Thymus pulegioides* L.) in terms of nutrients and bioactive phytochemicals. Wild specimens were studied for their nutritional value following AOAC procedures; free sugars, fatty acids, tocopherols, and ascorbic acid were analysed by chromatographic techniques; and phenolic compounds were screened by colorimetric methods and characterized by HPLC-DAD-ESI/MS[2–5]. All plants revealed low protein contents. The highest levels of carbohydrates were found in the flowering parts of the two spice plants. Fructose and glucose predominated in all samples except in *T. pulegioides* in which sucrose prevailed. These low-fat foods had healthy fatty acid profiles mainly composed by α-linolenic acid, a precursor of *n*-3 polyunsaturated fatty acids. *M. fontana* and *R. induratus* were sources of ascorbic acid; a 100 g portion of *R. induratus* contain more than 50% of the recommended dietary allowances (RDA) of vitamin C for adults. *R. induratus*, *T. pulegioides*, and *P. tridentatum* had high α-tocopherol levels, with 100 g servings contributing > 30% of the RDA. Regarding bioactive non-nutrients, while *P. tridentatum* was found particularly rich in total phenolics (particularly flavonoids and dihydroflavonois), *T. pulegioides* showed the highest total flavonoids content. This work demonstrates that the selected wild edible plants have a healthy nutritional profile and can be considered as interesting contemporary gourmet foods.

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