# Abstracts

**FOR**

## 5th International Symposium on

# Phytochemicals in Medicine and Food

**(5-ISPMF)**

**AUGUST 25 – SEPTEMBER 01 2021, NANCHANG, CHINA**

# Welcome Address

It is our great pleasure to welcome you to the 5th International Symposium on Phytochemicals in Medicine and Food (5-ISPMF), which is organized by the International Association of Dietetic Nutrition and Safety (IADNS), Phytochemical Society of Europe (PSE), Physiological Society of Japan, and Phytochemical Society of Asia (PSA). 5-ISPMF is jointly organized by Nanchang University, Jiangsu University and University of Vigo. Over 410 scientists from 62 counties and other 350 scientists from China have registered to attend this online conference. 5-ISPMF also has obtained the supports form several international journals including Food Chemistry Marine Drugs, International Journal of Molecular Sciences, Food Chemistry X, Oxidative Medicine and Cellular Longevity, Phytochemsitry Reviews, and so on. The international organizing committee and scientific committee board of 5-ISPMF assembled an exciting and diverse program, featuring 16 plenary lectures, 82 invited lectures, 142 oral presentation, a graduate student forum consisting of 70 short lecture, and more than 100 posters, which dedicate to creating a stage for exchanging the update research results in the phytochemicals for food and human health.

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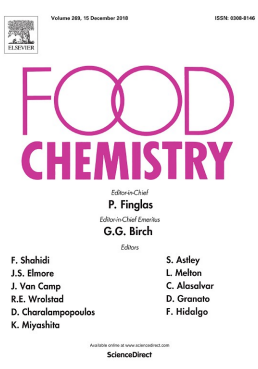


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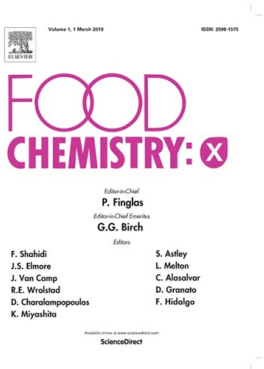


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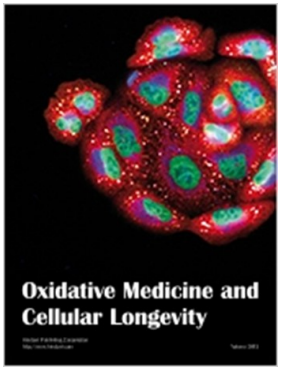


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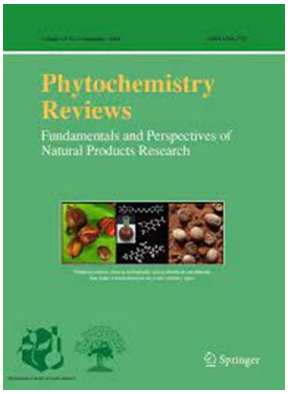


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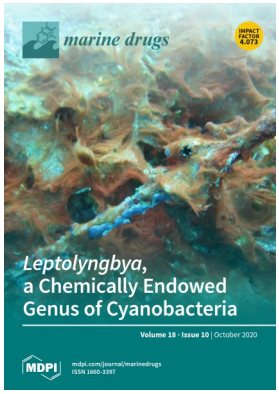


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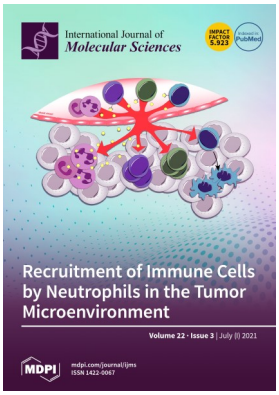


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| **14:50-15:00** | GL42 | **Haihua Ji, Nanchang University, China**<br>*In vitro* gastrointestinal digestion and fermentation models and their applications in food carbohydrates |
| **15:00-15:10** | GL43 | **Filipa A. Fernandes, Instituto Politécnico de Bragança, Portugal**<br>Nutritional and chemical characterization of the fruit of Adansonia digitata L. |
| **15:10-15:20** | GL44 | **Li Yang, University of Macau, China**<br>The effect of high-carbohydrate diet on the bioavailability of polyphenols and its mechanism |
| **15:20-15:30** | GL45 | **Mariana C. Pedrosa, Instituto Politécnico de Bragança, Portugal**<br>Ultrasound-assisted extraction of leaves of the olive tree (*Olea europaea* L.): response surface analysis optimization approach |
| **15:30-15:40** | GL46 | **Xin Qi, Yanbian University, China**<br>Research progress on pharmacological components and pharmacological effects of Perilla |
| **15:40-15:50** | GL47 | **Dhruv Thakur, National Institute of Food Technology Entrepreneurship and Management (NIFTEM), India**<br>Oleogel as a frying medium for preparation of potato chips |
| **15:50-16:00** | GL48 | **Ruifeng Wang, Huazhong Agricultural University, China**<br>Anti-obesity activity of B-type proanthocyanidin dimers: a structure-activity relationship study |
| **16:00-16:10** | GL49 | **Agnese Spadi, Instituto Politécnico de Bragança, Portugal**<br>Chemical composition and bioactive properties of *Eucalyptus globulus* L. essential oil |
| **16:10-16:20** | GL50 | **Yangyang Jia, Huazhong Agricultural University, China**<br>Effect of persimmon tannins on the emulsification characteristics of persimmon pectin |
| **16:20-16:30** | GL51 | **Myadagbadam Urtnasan, Institute of Traditional Medicine and Technology, Mongolia**<br>The validation of HPLC method of piperine determination in *Haliforte capsule* |
| **16:30-16:40** | GL52 | **Jinjin Liu, Nanchang University, China**<br>Effect of different treatments on the anthraquinones of *Cassia obtusifolia* seeds polysaccharides and its chemical composition |
| **16:40-16:50** | GL53 | **Jargalsaikhan Gombodorj, Mongolian National University of Medical Sciences, Mongolia**<br>The effect of khurtsiin deed-6 on nitroglycerin induced migraine model in rat |
| **16:50-17:00** | GL54 | **Lingchao Miao, University of Macau, Macau, China**<br>Anti-diabetic potential of apigenin, luteolin, and baicalein via partially activating PI3K/Akt/Glut-4 signaling pathways in insulin-resistant HepG2 cells |
| **17:00-17:10** | GL55 | **Iyanuoluwa Olubukola Ademola, Federal University of Technology, Nigeria**<br>Anti-amnestic effect of caffeine, catechin and theobromine on scopolamine-induced cognitive and neurochemical impairments in Wistar albino rats |
| **17:10-17:20** | GL56 | **Xin Li, Fujian Agriculture and Forestry University, China**<br>Structural characteristics of butylated lotus seed starch and its impact on gut microbiota |
| | | **Session 4**<br>**Mentor: Adriana Trifan, Saioa Gomez-Zorita, Elwira Sieniawska** |
| **17:20-17:30** | GL57 | **Yuanyuan Liu, Fujian Agriculture and Forestry University, China**<br>Anti-aging activities of green alga *Ulva lactuca* oligosaccharide via the brain-gut-microbiome axis in diabetic mice |
| **17:30-17:40** | GL58 | **Tao Xu, Zhejiang University, China**<br>Modulating the digestibility of cassava starch by esterification with phenolic acids |
| **17:40-17:50** | GL59 | **Maria Carpena, University of Vigo, Spain**<br>Microwave-assisted extraction from brown algae: the first step for their in-depth analysis |
| **17:50-18:00** | GL60 | **Hongcong Song, Northwest A&F University, China**<br>Profiling of terpene aroma glycosides in grapes by UPLC-Q-TOF/MS |
| **18:00-18:10** | GL61 | **Ajay V. Chinchkar, National Institute of Food Technology Entrepreneurship and Management (NIFTEM), Inida**<br>Effect of polyvinyl acetate (PVAc) coating on postharvest quality of lemon at ambient storage |
| **18:10-18:20** | GL62 | **Suhuan Mei, Jiangsu University, China**<br>Investigation into the anti-inflammatory mechanism of coffee leaf extract in LPS-induced Caco-2/U937 co-culture model through cytokines and NMR-based untargeted metabolomic analyses |
| **18:20-18:30** | GL63 | **Xiaodan Lu, Fujian Agriculture and Forestry University, China**<br>Inhibition effect of triglyceride accumulation by large yellow croaker Roe DHA-PC in HepG2 cells |
| **18:30-18:40** | GL64 | **Paula Garcia-Oliveira, University of Vigo, Spain**<br>Characterization of *in vitro* antioxidant, antitumor and anti-inflammatory properties of plant species from Rosaceae family |
| **18:40-18:50** | GL65 | **Rili Hao, Shandong Agricultural University, China**<br>Caffeic acid phenethyl ester against cadmium-induced spleen toxicity in mice: Role of miR-182- |

# GL45: Ultrasound-assisted extraction of leaves of the olive tree (*Olea europaea* L.): response surface analysis optimization approach

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The olive tree (*Olea europaea* L.) is a plant with great relevance in Mediterranean countries, being responsible for production of olives and olive oils. The leaves are rich sources of bioactive compounds (*e.g*., phenolic compounds) with antioxidant, antimicrobial and anti-inflammatory activities. The negative perception that consumers have of artificial preservatives has been driving the industry to seek substitution with natural compounds, with plant derivatives being strong candidates, being the first step the extraction of these compounds. The efficient extraction will allow a better functionalization of these substances in the final product, by improving the yield in specific bioactive compounds. The main objective of this work was to optimize the extraction yields of olive leaves (*Olea europaea* L.), through ultrasound assisted extraction by applying the response Surface Methodology. The factors analyzed were time (F1), ranging from 10 to 60 min, ultrasonic power (F2), ranging from 50 to 500 W and solvent (F3), ranging from 0 to 100% ethanol, using the Box-Behnken design with 17 individual randomized runs. The response was the dry weight of the extraction, which varied between 7.9 to 64.4 mg. The RSM analysis rendered a reduced quadratic model with no transformation for UAE. The optimization studies have shown a tendency to increase yield with the increase of time and power. Thus, higher limits on time and power could imply even higher extraction yields. The optimal dry weight extraction point (Y1) was obtained at 29 min (F1), 488 W (F2) and 14 % (F3) of ethanol. Future studies are being carried out with other responses, namely specific yields of bioactive molecules, with the ultimate goal of studying the potential of incorporating olive extracts in foods as natural preservatives.

**Acknowledgments:**
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