
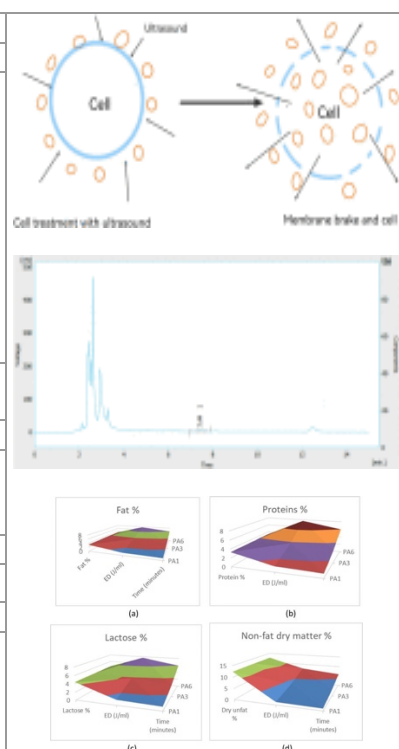


## FOOD INDUSTRY GROUP

### Contact details

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### Areas of expertise

#### Ultrasound application to improve the food products quality

- Unconventional ultrasonic pasteurization

#### Food Engineering:

Fermentation technology, biotechnology, extractive technology.

#### Dairy industry:

- milk-processing in order to obtain consumption milk and other dairy products;  
- laboratory tests to check the conformity of raw materials and finished products.

#### Food quality control:

- features that different foods must meet to fit existing standards,  
- quality control of the process streams to obtain food,  
- laboratory tests to verify compliance with various control parameters.

### Team

**Assoc. Prof. Dr. Liviu Giurgiulescu, Assist. Prof. Dr. Anca Dumuța, Assist. Prof. Dr. Zorica Marcela Voșgan**

### Representative projects

- **Molecular Assisted Breeding (MAB) techniques in routine screening of plant material. DRC project.** Participants: Hungarian University of Agriculture and Life Sciences, University of Ljubljana. University of Novi Sad, Technical University of Cluj-Napoca.
- “Research mobility within SEE Grants 2014-2021” Participants: Norwegian University of Science and Technology; Technical University of Cluj Napoca, Research domain “Development of Edible Films to Enhance Shelf-life of Muscle Foods, EEA-RO-NO-2018-0157”
- “Guidance in order to make the beneficiary aware about the scientific areas of interest to the services provider in the field of food processing technology” – contract with industry, 2017
- “International consulting contract BAUHAUS Science Press” and IETA Canada – 2015-2016
- Science without borders - Bridge between Central Europe and Balkan CEEPUS Program.

### Significant results

ISI papers in Red zone:

1. **Anca Dumuța, Zorica Voșgan, Cristina Mihali, Liviu Giurgiulescu, Melinda Kovacs, Radu Sugar, Lucia Mihalescu, 2022, The influence of unconventional ultrasonic pasteurization on the characteristics of curds obtained from goat milk with the low cholesterol content, Ultrasonics Sonochemistry, Volume 89, 2022, 106155, ISSN 1350-4177, <https://doi.org/10.1016/j.ultsonch.2022.106155>. Factor Impact 9.336**
2. Yakiang He, Ruolan Wang, **Giurgiulescu Liviu**, Qian Lu, 2017, An integrated algal-bacterial system for the bio-conversion of wheat bran treatment of rural domestic effluent, Journal of Cleaner Production Volume 165, 1 November 2017, Pages 458-467, <https://doi.org/10.1016/j.jclepro.2017.07.119>, ISSN: 0959-6526, Factor Impact 11.072


3. Oleg V. Ageev, Andrzej Dowgiało, Monika Sterczyńska, Joanna Piepiórka-Stepuk, **Liviu Giurgiulescu**, Monika Janowicz, Marek Jakubowski 2021, Experimental characterization and theoretical modeling of fracture and friction resistance forces during tuna cutting, Volume 307,2021,110648,https://doi.org/10.1016/j.jfoodeng.2021.110648.**Impact Factor 6.2033**

4. Desiderio, F.; Szilagyí, S.; Békefi, Z.; Boronkay, G.; Usenik, V.; Milić, B.; Mihali, C.; **Giurgiulescu, L.**, Polyphenolic and Fruit Colorimetric Analysis of Hungarian Sour Cherry Genebank Accessions. *Agriculture* **2023**, *13*, 1287. https://doi.org/10.3390/agriculture13071287 **Impact Factor 3.6**

Other publications in ISI journals

- Sabatino, Leo; Iapichino, Giovanni; Vetrano, Filippo; **Liviu Giurgiulescu** et al., EFFECTS OF POLYETHYLENE AND BIODEGRADABLE STARCH-BASED MULCHING FILMS ON EGGPLANT PRODUCTION IN A MEDITERRANEAN AREA CARPATHIAN JOURNAL OF FOOD SCIENCE AND TECHNOLOGY Volume: 10 Issue: 3 Pages: 81-89 Published: 2018
- **Dumuta, Anca; Vosgan, Zorica**; Pop, Flavia; et al., Study considering the microwave pasteurization of the raw milk used for yogurt production ROMANIAN BIOTECHNOLOGICAL LETTERS Volume: 23 Issue: 2 Pages: 13511-13518 Published: MAR-APR 2018
- Cimpenu, Baduca C.; Stoica, Felicia; Muntean, Camelia; **Giurgiulescu Liviu** et al., INFLUENCE OF CLONE AND ROSTOCK ON TOTAL POLYPHENOLS, CATECHIN, EPICATECHIN AND RESVERATROL IN RED WINE CABERNET-SAUVIGNON FROM SIMBURESTI VINEYARD CARPATHIAN JOURNAL OF FOOD SCIENCE AND TECHNOLOGY Volume: 10 Issue: 2 Pages: 159-167 Published: 2018
- Gougoulias, Nikolaos; Vagelas, Ioannis; **Giurgiulescu, Liviu**; et al., THE COIR SUBSTRATE FOR SOILLESS CULTURES, REUSED AS SOIL AMENDMENT (STUDY IN VITRO AND IN VIVO) CARPATHIAN JOURNAL OF FOOD SCIENCE AND TECHNOLOGY Volume: 9 Issue: 4 Pages: 61-70 Published: 2017
- Gougoulias, Nikolaos; Giurgiulescu, Liviu; Vagelas, Ioannis; et al., CHANGES IN TOTAL PHENOL CONTENT AND ANTIOXIDANT ACTIVITY OF GREEK TABLE OLIVE CULTIVAR AMFISSIS DURING MATURATION STUDIA UNIVERSITATIS BABES-BOLYAI CHEMIA Volume: 62 Issue: 2 Pages: 387-396 Part: 2 Published: 2017
- **L. Giurgiulescu**, I. Vagelas, and N. Gougoulias, "Research regarding the influence of Penicillium chrysogenum, Penicillium expansum and Phanerochaete spp. on chemical composition of red wines", *Romanian Biotechnological Letters*, vol. 21, pp. 11290-11297, Mar-Apr 2016.
- Cical, Elena; Mihali, Cristina; Mecea, Mircea; **Dumuta Anca** et al., CONSIDERATIONS ON THE RELATIVE EFFICACY OF ALUMINUM SULPHATE VERSUS POLYALUMINUM CHLORIDE FOR IMPROVING DRINKING WATER QUALITY, STUDIA UNIVERSITATIS BABES-BOLYAI CHEMIA Volume: 61 Issue: 2 Pages: 225-238 Published: 2016
- N. Gougoulias, L. Giurgiulescu, D. Kalfountzos, A. Papachatzis, I. Vagelas, D. Ftakas, et al., "COIR EMPLOYED AS SOILLESS CULTIVATION SUBSTRATE AND ITS INTERFERENCE WITH NUTRIENT SOLUTION DURING TWO TOMATOES CROPPING PERIODES (CASE STUDY)", *Studia Universitatis Babes-Bolyai Chemia*, vol. 60, pp. 177-185, Jun 2015.
- **Zorica VOŞGAN**, Cristina MIHALI, Monica MARIAN, **Anca DUMUŢA**, Flavia POP, Lucia MIHALESCU, Evaluation of the Microbial Quality and Total Phenolic Content of a Local Smoked Cheese, Bulletin UASVM Food Science and Technology 77(1)/2020 ISSN-L 2344-2344; Print ISSN 2344-2344; Electronic ISSN 2344-5300.
- **A. Dumuta, Z. Vosgan**, M. Jelea, F. Pop, T. Dippong, L. Mihalescu, C. Mihali, "Microbiological Aspects Considering the Production of Nutraceutical Curd Containing Onion", *Animal Science and Biotechnologies*, Vol.49, nr.2, pp.40-45, 2016.
- Nikolaos Gougoulias, **Liviu Giurgiulescu**, Ioannis Vagelas, Eleni Wogiatzi, Maria Nektaria Ntalla,(2017) Phenol Content and Antioxidant Activity of Greek Table Olive Cultivar Amfissis During Maturation, Studia Universitatis Babes-Bolyai, Chemia, Tom2, pp. 387-396

#### The offer addressed to the economic environment

Consulting	Implementation of quality management systems in enterprises of food industry
Training	Education and training in the HACCP; VACCP and TACCP
	
Research & development	<p><b>Microbiology analyses:</b> NTG, NCS, Yeasts and Moulds, Salmonella, E. coli, Enterobacteriaceae, L. monocytogenes, B. cereus, Coliforms, Staphylococcus aureus.</p> <p><b>Ultrasound application to improve the quality of food products.</b></p> <p><b>Dairy industry:</b></p> <ul style="list-style-type: none"> <li>- Researching the possibility of replacing the classical method of pasteurization with unconventional methods, like microwave technology, microfiltration technique or the use of high pressure.</li> </ul> <p><b>Food biotechnology</b></p> <ul style="list-style-type: none"> <li>- Wine biotechnology; Beer biotechnology; Dairy products biotechnology;</li> <li>- Enzymes application in new food products.</li> </ul>

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