
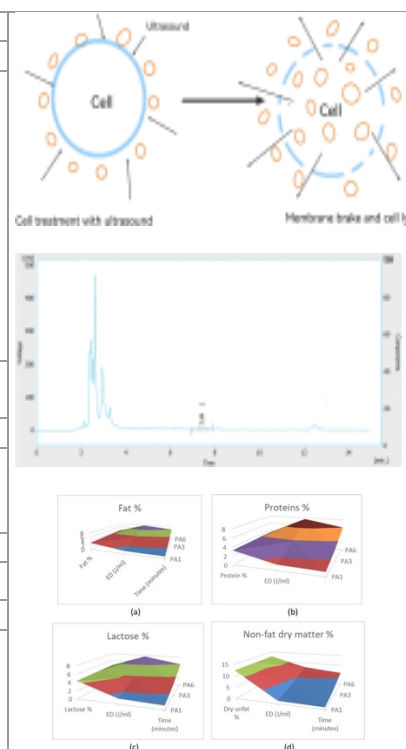


FOOD INDUSTRY GROUP

Contact details

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Acronym	GCDIA
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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

Prof. Dr. Hab. Liviu Giurgiulescu; Assist. Prof. Dr. Anca Dumuța; Assist. Prof. Dr. Zorica Marcela Voșgan, Phd student Babiciu Alexandru; Phd student Todea (Semeniuc) Ligia

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 IIETA Canada** – 2015-2016
- **Science without borders - Bridge between Central Europe and Balkan CEEPUS Program.**

Significant results

ISI papers in Red zone:

1. **Dumuța, Anca, Zorica Voșgan, Liviu Giurgiulescu, Cristina Mihali, and Lucia Mihalescu** 2025. "Kefir and Lactobacillus plantarum Cultures in the Production of Fermented Blueberry Juices" Sustainability 17, no. 23: 10488. <https://doi.org/10.3390/su172310488>, **Factor Impact 3.6**
2. **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**
3. **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.; Szilagyı, 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
- Anca Dumuta, Liviu Giurgiulescu, Leonard Mihaly-Cozmuta, and Zorica Vosgan, PHYSICAL AND CHEMICAL CHARACTERISTICS OF MILK. VARIATION DUE TO MICROWAVE RADIATION, Croat. Chem. Acta 84 (3) (2011) 429–433. CCA-3493, <http://dx.doi.org/10.5562/cca1785>
- 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	Microbiology analyses: NTG, NCS, Yeasts and Moulds, <i>Salmonella</i> , <i>E. coli</i> , <i>Enterobacteriaceae</i> , <i>L. monocytogenes</i> , <i>B. cereus</i> , <i>Coliforms</i> , <i>Staphylococcus aureus</i> . Ultrasound application to improve the quality of food products. Dairy industry: - Researching the possibility of replacing the classical method of pasteurization with unconventional methods, like microwave technology, microfiltration technique or the use of high pressure. Food biotechnology - Wine biotechnology; Beer biotechnology; Dairy products biotechnology; - Enzymes application in new food products.

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