

## Curriculum Vitae

**First name, last name:** Sonia A. Socaci

**Research ID:** <https://orcid.org/0000-0003-0594-4628>,

ResearcherID: P-5863-2014

Google Scholar profile:

<https://scholar.google.com/citations?user=bVxkvw4AAAAJ&hl=en&authuser=1>



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### Domains of expertise:

Food Biotechnologies, Exploitation of food wastes, Food Chemistry, Bioactive compounds, Food additives, Food quality control and authentication, Functional foods, Method optimization (design of experiments), Chemometry

### Education:

Institution	Period	Degrees or diplomas
University of Agricultural Sciences and Veterinary Medicine, Cluj-Napoca	2019	Habilitation in Biotechnology
University of Agricultural Sciences and Veterinary Medicine, Cluj-Napoca	2006 - 2009	PhD in Biotechnology
University of Agricultural Sciences and Veterinary Medicine, Cluj-Napoca	2004 - 2006	MSc in Food Quality Management
Faculty of Chemistry, UBB Cluj	2004 - 2005	MSc in Applied Electrochemistry
Faculty of Chemistry, UBB Cluj	2000 - 2004	BSc in Chemistry

### Professional experience:

Institution	Period	Position	Description
Faculty of Food Science and Technology, UASVM-CN	2016 - 2024	Vice-dean for Research	Management of research activities, increase the scientific visibility of faculty members, associate editor of the faculty journal (indexed in Web of Science)
UASVM-CN, Food Quality And Safety Laboratory	2013 - present	Head of research laboratory	Management of research activities, development and optimization of analysis methods
Faculty of Food Science and Technology, UASVM-CN	2020 - present	Professor	Teaching and research activity in food chemistry (physico-chemical analysis, GC-MS, HS/GC-MS, ITEX/GC-MS analysis), analysis of essential oils, Food authentication, Food additives, food safety, functional foods
	2017 - 2020	Associate professor	
	2013 - 2017	Lecturer	
	2009 – 2013	Assistant professor	
University of Agricultural Sciences and Veterinary Medicine	2011 –2013	Post-doc fellowship	FSE POSDRU/89/1.5/S/60746 project, research theme: Applied chemometry for food products authentication
University of Agricultural Sciences and Veterinary Medicine	Jul – Oct 2006	Chemist	Food Chemistry (GC-MS, HS/GC-MS, ITEX-GC-MS analysis)

University Joseph Fourier, Grenoble, France	Feb – June 2003	Erasmus fellowship	Research activity in the field of electrochemistry and biosensors
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### Trainings/courses:

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	<b>Period</b>	<b>Description / diplomas</b>
Course “Specialists in staff training and development”	2018	certificate series L, no. 00161079 / 20.02.2018, released by MMFPS and MECTS
Course e-learning “Nutrition101x: Nutrition and Health part 1: Macronutrients and Overnutrition”	2015	Wageningen University through edX
Course e-learning „CHEM181x: Food for Thought”	2014	McGill University through edX
Course e-learning „Child Nutrition and Cooking 2.0”	2014	Stanford University through Coursera Inc
Course “Research Management”	2012	Graduation certificate (project manager skills) series G no. 00237579, released by MMFPS and MECTS, 27.06.2012
Course „Principles and Methods of Food Authenticity”	2011	MoniQA Food Scientist Training in E-Learning (eFST)
Course “Advance techniques in gas-chromatography coupled with mass spectrometry”, organizer: SC Comporter SRL	2008	Gas-chromatography mass spectrometry method optimization, troubleshooting, peak identification
Master course „Food and Health”	2007	Socrates Intensive Program, collaboration UASVM Cluj-Napoca, University of Gent - The Graduate School of VLAG, Wageningen

### Research projects:

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#### Coordinator:

- **Project PN-III, P4 – Fundamental and frontier research – PCE, 2021 – 2023:** Development of novel nanocarriers for enhanced physico-chemical properties, bioactivities and stability of essential oils, contract PCE 78/2021
- **Project PN-III, Human Resources – TE, 2018 – 2020:** New integrated approach for food waste valorization, contract 60/02.05.2018
- **Project PN-II, Human Resources –TE, 2015 – 2017:** Natural extracts of bioactive compounds from the residue of brewer’s spent grain with application in the development of new functional foods, contract 52/01.10.2015, www.bioencapbread.com
- **Project PN-II, Innovation Checks, oct. 2013-apr. 2014:** Development of a functional bread fortified with brewers’ spent grain flour, contract 188CI/21.10.2013
- **Project PN II, Human Resources – TD, 2008-2009:** Optimization of GC-MS methods for the determination of essential oils from aromatic and medicinal plants fingerprint, contract 160/16.09.2008
- **2016 – 2019:** 5 contracts with SMEs for services and consultancy in food science

#### Member (in over 20 national/international research projects):

- **Project PN-III-P1-1.2-PCCDI-2017-0056, 2018 – 2020:** Functional collaboration model between public research organizations and the private sector for high-level scientific and technological services in the bio economy field, contract no. 2PCCDI/30.03.2018
- **Project PN-III-P1-1.2-PCCDI-2017-0046, 2018-2020:** Development of advanced platforms for the analysis and modeling of complex biological systems

- **Project PN-III-P1-1.1-TE-2016-0661, 2018 – 2020:** Sugar reduction and increased bioavailability of agro-food waste compounds in sweet bakery products
- **Project PN-III-P2-2.1-PED-2016-1237, 2017-2019:** Efficient use of raw glycerol into lactic acid production
- **Project PN-III-P2-890/12.09.2017, 2017-2019:** Alternative analytical approaches for detecting adulteration of honey with emphasis on its biologically active compounds, contract 194PED/2017
- **Project PN-II-PT-PCCA-2013-4-0743, partnerships, 2013-2015:** A new generation of functional probiotic drinks with impact on the gastrointestinal tract health, contract 154/1.07.2014
- **Project PN-II, Innovation Checks, 2013-2014:** Optimization of the extraction method and characterization of kefir polysaccharide, natural ingredient with applications in food industry, contract 194CI/21.10.2013
- **Project PN-II, Innovation Checks, 2013-2014:** The obtaining technology of a functional mustard with medicinal plants extract, contract 186CI/21.10.2013
- **Project PN-II, Innovation Checks, 2012:** Energizing candies, contract no. 12CI/2012
- **Project PN-II, Innovation Checks, 2012:** Increased productivity, competitiveness and quality of products produced at Mag Comimpex'94, contract no. 36CI/2012
- **Project PNCD II Ideas, 2011-2014:** Effect of esterification on the stability and antioxidant capacity of xanthophylls – from model systems to food systems, contract nr. 276/5.10.2011
- **Project PN II, 2008-2011:** Reduction of the Mycotoxins Contamination of Cereals in Order to Get Safe Bakery Products with High Fibres Content – acronym FIBRESIG
- **Project CEEX – module IV, 2005-2007:** Food Safety and Control Testing Laboratory Development

## Publications:

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**12 chapters** in international books (6 as main author)

**1 chapter** in a national book (Polifenolii – acțiuni și beneficii, in Rolul nutriției în prevenirea bolilor cardiovasculare, Ed. Medicala Universitara Iuliu Hatieganu, Cluj-Napoca, ISBN 978-973-693-847-4)

**1 scientific book** (Tehnici de extracție, separare și analiză cromatografică a uleiurilor volatile, 2017, Ed. AcademicPres, Cluj-Napoca, ISBN 978-973-744-563-6)

**Editor to 1 international book:** Food Preservation and Waste Exploitation, Intech, ISBN: 978-1-78985-426-8

**3 university practical guides and 3 text books** (food additives, food authenticity, functional compounds)

**144 ISI scientific papers** (according to WoS)

## Relevant ISI articles and scientific books/chapters

1. Anca C. Farcas, **Sonia A. Socaci**, Dubravka Novotni and Marco Garcia-Vaquero, 2024, Innovative Technologies to Extract High-Value Compounds, in Sourdough Innovations Novel Uses of Metabolites, Enzymes, and Microbiota from Sourdough Processing, Taylor and Francis Group by CRC Press, London, UK, ISBN 9780367674977
2. Andreea David, Anca Fărcaș, **Sonia A. Socaci**, 2023, An overview of the chemical composition and bioactivities of *Vetiveria zizanioides* (L.) Nash essential oil, *Trends in Food Science & Technology*, 140, 104153, <https://doi.org/10.1016/j.tifs.2023.104153>
3. Madalina Lorena Medeleanu , Anca Corina Farcas , Cristina Coman , Loredana Leopold, Zorița Diaconeasa, **Sonia A. Socaci**, 2023, Citrus essential oils – Based nano-emulsions: Functional properties and potential applications, *Food Chemistry: X*, 20, 100960
4. **Sonia A. Socaci**, Liana Salanță, Anca C. Fărcaș, Silvia Amalia Nemeș, and Mădălina Medeleanu, 2023 Food Additives as Functional Ingredients in Food Products, in Sustainable Use of Feed Additives in Livestock, Springer Nature Switzerland AG, ISBN 978-3-031-42854-8 ISBN 978-3-031-42855-5
5. Fărcaș Anca C., Galanakis, Charis M., Socaciu, Carmen, Pop Oana L., Țibulcă Dorin, Păucean Adriana, Jimborean Mirela A., Fogarasi Melinda, Salanță Liana C., Tofană Maria, **Socaci Sonia A.**,

- 2021**, Food Security during the Pandemic and the Importance of the Bioeconomy in the New Era, *Sustainability*, 13(1), Article Number: 150
6. Fărcaș A., **Sonia A. Socaci**, Zorița Diaconeasa, **2020**, Introductory Chapter: From Waste to New Resources in *Food Preservation and Waste Exploitation*, Eds. **Socaci Sonia A.**, Fărcaș Anca C, Thierry Aussenac, Jean-Claude Laguerre, Intech, Croatia, ISBN: 978-1-78985-426-8, DOI: 10.5772/intechopen.89442
  7. Adela Pinteau, Francisc Vasile Dulf, Andrea Bunea, **Sonia Ancuța Socaci**, Elena Andreea Pop, Vlăduț-Alexandru Opriță, Daniele Giuffrida, Francesco Cacciola, Giovanni Bartolomeo, Luigi Mondello, **2020**, Carotenoids, Fatty Acids, and Volatile Compounds in Apricot Cultivars from Romania—A Chemometric Approach, *Antioxidants*, 9(7), 562; <https://doi.org/10.3390/antiox9070562>
  8. **Socaci Sonia A.**, A. Fărcaș, M. Tofană, **2020**, Functional Ingredients derived from aromatic plants in Feed Additives – Aromatic Plants and Herbs in Animal Nutrition and Health, Academic Press, Elsevier, ISBN 9780128147009, <https://doi.org/10.1016/B978-0-12-814700-9.00008-X>
  9. Elena-Suzana Biris-Dorhoi, Delia Michiu, Carmen R. Pop, Ancuta M. Rotar, Maria Tofana, Oana L. Pop, **Sonia A. Socaci\*** and Anca C. Farcas, **2020**, Macroalgae—A Sustainable Source of Chemical Compounds with Biological Activities, *Nutrients*, 12(10), 3085; <https://doi.org/10.3390/nu12103085>
  10. Daniel Cruceriu, Zorita Diaconeasa, **Sonia Socaci**, Carmen Socaciu, Ovidiu Balacescu, Elena Rakosy-Tican, **2020**, Extracts of the Wild Potato Species *Solanum chacoense* on Breast Cancer Cells: Biochemical Characterization, In Vitro Selective Cytotoxicity and Molecular Effects, *Nutrition and Cancer*, <https://doi.org/10.1080/01635581.2020.1761407>
  11. Călinoiu L., A. Fărcaș, **S. Socaci**, D.C. Vodnar, **2019**, Innovative Sources in Nutraceutical and Natural Products Pharmaceuticals, Academic Press, Elsevier, <https://doi.org/10.1016/B978-0-12-816450-1.00008-8>
  12. Alexandra D. Frond, Cristian I. Iuhas, Ioana Stirbu, Loredana Leopold, **Sonia Socaci**, Stanilă Andreea, Huseyin Ayvaz, Socaciu Andreea, Socaciu Mihai, Zorița Diaconeasa, Carmen Socaciu, **2019**, Phytochemical Characterization of Five Edible Purple-Reddish Vegetables: Anthocyanins, Flavonoids, and Phenolic Acid Derivatives, *Molecules*, 24, 1536; doi:10.3390/molecules24081536
  13. Pop Oana L., **Socaci Sonia A.**, et al., **2019**, Pro and prebiotics foods that modulate human health in The role of alternative and innovative food ingredients and products in consumer wellness, Academic Press, Elsevier, ISBN 978-0-12-816453-2, pp 283 – 313
  14. **Socaci Sonia A.**, et al., **2018**, Introduction in Functional Components for Membrane Separations, in Separation of Functional Molecules in Food by Membrane Technology, Academic Press, Elsevier, ISBN 978-0-12-815056-6, 31-77, <https://doi.org/10.1016/B978-0-12-815056-6.00002-4>
  15. Fogarasi Melinda, **Sonia Ancuța Socaci** (corresponding), et al., **2018**, Bioactive Compounds and Volatile Profiles of Five Transylvanian Wild Edible Mushrooms, *Molecules*, 23, 3272
  16. **Socaci Sonia A.**, et al., **2018**, Influence of the extraction solvent on phenolic content, antioxidant, antimicrobial and antimutagenic activities of brewers' spent grain, *J Cereal Sci*, 80: 180-187
  17. **Socaci Sonia A.**, et al., **2017**, Food Wastes as Valuable Sources of Bioactive Compounds, in Functional Food-Development of Superfood and its Role in Medicine, Intech, Croatia, ISBN 978-953-51-2942-4, p 75-93, DOI: <http://dx.doi.org/10.5772/66115>
  18. Fărcaș Anca C., **Sonia A. Socaci** (corresponding), et al., **2015**, Volatile profile, fatty acids composition and total phenolics content of brewers' spent grain by-product with potential use in the development of new functional foods, *J Cereal Sci*, 64, 34-42
  19. **Socaci Sonia A.**, et al., **2014**, Chemometric discrimination of different tomatoes cultivars based on their volatile fingerprint in relation to lycopene and total phenolics content, *Phytochem Anal*, 25(2):161–9
  20. Rodica Mărgăoan, Liviu Al. Marghițaș, Daniel S. Dezmiorean, Francisc V. Dulf, Andrea Bunea, **Sonia A. Socaci**, Otilia Bobiș, **2014**, Predominant and Secondary Pollen Botanical Origins Influence the Carotenoid and Fatty Acid Profile in Fresh Honeybee-Collected Pollen, *Journal of Agricultural and Food Chemistry*, 62, 6306–6316
  21. **Socaci Sonia A.**, et al., **2013**, In-tube extraction and GC-MS Analysis of Volatile Components from Wild and Cultivated sea buckthorn (*Hippophae rhamnoides* L. ssp. *Carpatica*) Berry Varieties and Juice, *Phytochem Anal*, 24(4), 319-328
  22. Vicaș Simona I., Alin C. Teușdea, Mihai Cărbunar, **Sonia A. Socaci**, Carmen Socaciu, **2013**, Glucosinolates Profile and Antioxidant Capacity of Romanian *Brassica* Vegetables Obtained by Organic and Conventional Agricultural Practices, *Plant Foods for Human Nutrition*, 68(3), 313-321

## International visibility:

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**ISI publications: 144**

**Cumulated impact factor: >150**

**H-index:** 29 (Google Scholar) / 22 (WoS) / 25 (Scopus)

**Citations:** 2963 (Google Scholar) / 1519 (WoS) / 1706 (Scopus)

**Associate Editor (2016- present)** – Bulletin of University of Agricultural Sciences and Veterinary Medicine Cluj-Napoca – Food Science and Technology (journal indexed in WoS)

**Guest Editor (2019 – 2023)**

- Sustainability journal (IF 2.576), Special Issue "High Added-Value Molecules Recovered from Agri-Food Waste and by-Products"
- Plants journal (IF 2.762), Special Issue "Plant Bioactive Compounds and Prospects for Their Use in Beverages"

**Reviewer for scientific journals:** > 20 journals ISI Web of Science Core Collection; >10 journals Indexed in international databases

**International Conferences:** over 30 communications

**Organizer of international conferences (2016 – present):** International Conference on Life Sciences for Sustainable Development, UASVM Cluj-Napoca, Romania, <https://symposium.usamvcluj.ro/>

**Evaluator for research projects:** EU Horizon 2020, The Malta Council for Science and Technology, Poland National Science Centre

**Member in commissions for PhD thesis defense**

**Prizes and awards**

- > 20 Gold Medal / Excellence Diploma in the field of functional products and agri-food waste valorization, International Inventions Salons
- > 30 research articles awarded by the UEFISCDI in the national competitions "Awards for the research results".

## Professional affiliations:

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**2016 – present,** member of Slow Food Cluj Transylvania

**2016 – present,** member of ISEKI-Food Association (group of Food Waste Recovery)

**2015 – present,** member of EPSO (European Plant Science Organization) and National Representative during 2020-2023

**2011 – present,** member of Romanian Society of Biochemistry and Molecular Biology

## Teaching activity:

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### Coordinated disciplines

**Bachelor level:** Food Additives, Food Authenticity and Fraud Detection

**Master level:** Food Waste Exploitation, Food Quality and Quality Control, and Flavors and Modern Flavoring Systems

### Coordinated students

2009 – present – over 80 diploma theses, over 30 dissertation theses

2012 – present – over 70 participations with students to national/international symposiums/competitions

**Fellowships -** 2014 – 2023 Erasmus Teaching Mobilities

## Personal skills and competences:

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### Analytical skills

Analytical chemistry

Physical-chemistry techniques (chromatography: GC, GC-MS, ITEX/GC-MS, HPLC; spectroscopy UV-VIS; conductometry; encapsulation techniques)

Green-Extraction methods (e.g. ultrasound assisted extraction, microwave-assisted extraction)

Design of experiments and data analysis

### Social skills

Very good in team work and coordination of research activities;

Flexibility, dedication, adaptability;

Critical thinking and objective assessment of the research results (skills acquired during the work in the interdisciplinary projects).

Mother tongue	Romanian					
Other language(s) /Self-assessment	Understanding		Speaking		Writing	
English	C2	Proficient User	C1	Proficient User	C1	Proficient User
French	B2	Independent User	B1	Independent User	B1	Independent User
Italian	B2	Independent User	B1	Independent User	A2	Basic User
German	A2	Basic User	A2	Basic User	A1	Basic User

### Additional information:

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List of publications: <https://scholar.google.com/citations?user=bVxkvw4AAAAJ&hl=en&authuser=1>

ResearchGate profile: [https://www.researchgate.net/profile/Sonia\\_Socaci](https://www.researchgate.net/profile/Sonia_Socaci)

Research Laboratory: <https://eertis.eu/erlb-2300-000w-0675>

Cluj-Napoca, on 22<sup>nd</sup> February 2024

Sonia A. Socaci  
Prof. habil., PhD