

Curriculum vitae



Anita Klaus

Department for Industrial Microbiology

University of Belgrade - Faculty of Agriculture
Nemanjina 6
11080 Belgrade
Republic of Serbia

tel. +381114413326

e-mail: aklaus@agrif.bg.ac.rs

Scopus ID: 41261835000

ORCID ID: 0000-0001-5073-3702

eNAUKA: AZ081

Scopus: 2230+ citations, h-index 23

Google Scholar: 3575+, h-index 27

Education

PhD (2011) in Industrial Microbiology: "Chemical characterization, antimicrobial and antioxidant properties of polysaccharides from lignocellulosic fungi *Ganoderma* spp., *Laetiporus sulphureus* and *Schizophyllum commune*", University of Belgrade, Faculty of Agriculture, Institute for Food Technology and Biochemistry, Department for Industrial Microbiology

MSc (2004) in Industrial Microbiology: "Production and bioactive properties of the mushroom *Ganoderma lucidum*", University of Belgrade, Faculty of Agriculture, Institute for Food Technology and Biochemistry, Department for Industrial Microbiology

BSc (1997) in Industrial Microbiology: "Cultivation of *Morchella* sp. under controlled conditions", University of Belgrade, Faculty of Agriculture, Institute for Food Technology and Biochemistry, Department for Industrial Microbiology

Higher - education activities

Anita Klaus is currently a Full Professor at University of Belgrade, Faculty of Agriculture, Institute for Food Technology and Biochemistry, Department for Industrial Microbiology. She delivers lectures on (i) Microbiological spoilage of food, (ii) Bioactive substances of microbiological origin, (iii) Industrial microorganisms in plant-based foods, at undergraduate

(BSc) level; (iv) Application of bioactive substances of microbiological origin and (v) Methods in food microbiology, at postgraduate (MSc) level; (vi) Food microbiology and predictive microbiology, (vii) Microbiological methods of analysis, at PhD level of studies, (viii) Methods in the control of microbiological safety and food hygiene, (ix) Microbiological criteria for food and laboratory design, at specialist academic studies. Over the period of 2011-to date she supervised 10 PhD thesis, (co)supervised 6 PhD thesis, and over 80 master, bachelor and specialist's theses.

Research activities

Main Areas of Research: (i) Microbiological food safety, (ii) mushroom cultivation, (iii) extraction methods, (iv) examination of bioactive potential of selected culinary / medicinally mushrooms, (v) study of biofilm formation in food industry and possible aspects of prevention and elimination of biofilms (including the influence of mushroom extracts on biofilms).

Participation in 7 national and 3 international projects, among which the most significant was EU Commission project AREA, FP7-REGPOT-2012-2013-1, No. 316004, "Advancing Research in Agricultural and Food Sciences at Faculty of Agriculture, University of Belgrade" (2013-2016).

Reviewer in over 70 highly ranked international journals.

Specializations

1. Specialization in the field of making extracts and their effect on cell lines, on Plant Research International, Department for Cell Cybernetics, Wageningen, Holland - "The purification and characterization of polysaccharide components from the basidiomycetous fungi *Agaricus* spp., *Coprinus* spp. and *Ganoderma* spp. and their influence on the immune activity", 2002. 2. Training course in Food Safety Microbiology at Kornacki Food Safety Associates, LLC, 6939 Raymond Rd., Madison, WI 53719, USA, 2003; 3. PCR workshop at the Faculty of Veterinary Medicine in Belgrade, 2004; 4. Seminar: MILLIPORE Process Monitoring Tools in Microbiological Quality Control in Food and Beverage Industry, Belgrade, 2006; 5. Training course organised within safe foods integrated project: "Stakeholder engagement in food risk analysis: Opportunities and Dangers?", Central Food Research Institute Herman Ottó út 15., 1022 Budapest, Hungary, 2008. 6. Workshop: Actualization of Microbiological methods for food samples; Advances on PCR and Immuno-separation technology, Belgrade, 2009. 7. NATO Advanced Training Course „Food Safety and Security-Rapid detection methods, policy making and emergency“, Belgrade, 2009; 8. Training in the field of knowledge and interpretation of standard requirements SRPS ISO 17025:2005. University of Belgrade, Faculty of Agriculture, Belgrade, 2010; 9. MIC method on Biotechnical faculty, University of Ljubljana, Slovenia, within the framework of bilateral projects Slovenia - Serbia: Microbiological (*Campylobacter*) risk assessment and management in poultry meat production chain, 2011., and Exploitation of waste plant material after distillation of essential oil, 2011.; 10. Innovation and entrepreneurship workshop, Centre for research, development and technology transfer, University of Zagreb, Croatia, 2014.

Other of interests

Foreign languages: English fluent

Computer skills: Advanced using of MS Office

International experience: Austria, Croatia, Netherlands, North Mcedonia, Malaysia, Slovenia, USA

Driving licence: B

Publications

Over 50 prominent peer reviewed scientific papers in the international journals, 3 book chapters and over 120 presentations at conferences.

Selected publications:

A. Klaus, Wan Abd Al Qadr Imad Wan-Mohtar, Ganoderma in Traditional Culture, in: K. Acharya and S. Kathua (Eds.), *Ganoderma Cultivation, Chemistry and Medicinal Applications*, Volume 1, (1st Edition), Taylor & Francis Ltd, Boca Raton, CRC Press, 2024, pp. 35-60. eBook ISBN9781003354789

<http://dx.doi.org/10.1201/9781003354789-3>

Vunduk Jovana, Kozarski Maja, Klaus Anita, Jadranin Milka, Pezo Lato, Todorović Nina, 2024. Preventing mislabeling of organic white button mushrooms (*Agaricus bisporus*) combining NMR-based foodomics, statistical, and machine learning approach, *Food Research International*, 198. 115366.

<http://doi.org/10.1016/j.foodres.2024.115366>

Lazić V, Klaus A, Kozarski M, Doroški A, Tosti T, Simić S, Vunduk J. 2024. The Effect of Green Extraction Technologies on the Chemical Composition of Medicinal Chaga Mushroom Extracts. *Journal of Fungi*, 10(3), 225. ISSN: 2309-608X

<https://doi.org/10.3390/jof10030225>

Kozarski M, Klaus A, Špirović-Trifunović B, Miletić S, Lazić V, Žižak Ž, Vunduk J. 2024. Bioprospecting of Selected Species of Polypore Fungi from the Western Balkans. *Molecules*, 29(2), 314.

<https://doi.org/10.3390/molecules29020314>

Vunduk, J., Klaus, A., Lazić, V., Kozarski, M., Radić, D., Šovljanski, O., Pezo, L. 2023. Artificial Neural Network Prediction of Antiadhesion and Antibiofilm-Forming Effects of Antimicrobial Active Mushroom Extracts on Food-Borne Pathogens. *Antibiotics*, 12, 627.

<https://doi.org/10.3390/antibiotics12030627>

Maja Kozarski, Anita Klaus, Leo van Griensven, Dragica Jakovljević, Nina Todorović, Wan Abd Al Qadr Imad Wan-Mohtar, Jovana Vunduk, 2023. Mushroom β -glucan and polyphenol

formulations as natural immunity boosters and balancers: nature of the application, Food Science and Human Wellness, 12(2), 378-396. ISSN: 2213-4530
<http://doi.org/10.1016/j.fshw.2022.07.040>

A. Klaus, Wan Abd Al Qadr Imad Wan-Mohtar, Cultivation strategies of edible and medicinal mushrooms, in: S.B. Dhull, A.Bains, P. Chawla, P.K. Sath (Eds.), Wild Mushrooms Characteristics, Nutrition, and Processing (1st Edition), Taylor & Francis Ltd, London, 2022, pp. 23-66. ISBN: 9780367692513
DOI: 10.1201/9781003152583-3
<https://www.taylorfrancis.com/chapters/edit/10.1201/9781003152583-3/cultivation-strategies-edible-medicinal-mushrooms-anita-klaus-wan-abd-al-qadr-imad-wan-mohtar>

Nurfadzilah Ahmad, Jovana Vunduk, Anita Klaus, Nofri Yenita Dahlan, Soumya Ghosh, Firdaus Muhammad-Sukki, Laurent Dufossé, Nurul Aini Bani and Wan Abd Al Qadr Imad Wan-Mohtar, 2022. Roles of Medicinal Mushrooms as Natural Food Dyes and Dye-Sensitised Solar Cells (DSSC): Synergy of Zero Hunger and Affordable Energy for Sustainable Development, Sustainability, 14, 13894, ISSN 2071-1050,
<https://doi.org/10.3390/su142113894>

Anita Klaus, Wan Abd Al Qadr Imad Wan-Mohtar, Biljana Nikolić, Stefana Cvetković, Jovana Vunduk, 2021. Pink oyster mushroom *Pleurotus flabellatus* mycelium produced by an airlift bioreactor - the evidence of potent in vitro biological activities, World Journal of Microbiology and Biotechnology, 37(1), 17. Springer, Electronic ISSN: 1573-0972,
DOI: 10.1007/s11274-020-02980-6
<https://doi.org/10.1007/s11274-020-02980-6>

Jovana Vunduk, Wan Abd Al Qadr Imad Wan-Mohtar, Shaiful Azuar Mohamad, Nur Hafizati Abd Halim, Ahmad Zainuri Mohd Dzomir, Zeljko Zizak, Anita Klaus, 2019. Polysaccharides of *Pleurotus flabellatus* strain Mynuk produced by submerged fermentation as a promising novel tool against adhesion and biofilm formation of foodborne pathogens, LWT- Food Science and Technology, 112, Article 10822. ISSN: 0023-6438.
DOI:10.1016/j.lwt.2019.05.119,
<https://www.sciencedirect.com/science/article/pii/S002364381930550X>

Anita Klaus, Maja Kozarski, Jovana Vunduk, Nina Todorovic, Dragica Jakovljevic, Zeljko Zizak, Vladimir Pavlovic, Steva Levic, Miomir Niksic, Leo J L D Van Griensven, 2015. Biological potential of extracts of the wild edible Basidiomycete mushroom *Grifola frondosa*, Food Research International, 67, 272–283. ISSN: 0963-9969
DOI:10.1016/j.foodres.2014.11.035
<http://www.sciencedirect.com/science/article/pii/S0963996914007492>