

Candidate supervisor's information summary form

Name and surname, degree, title: Joanna Bryś, DSc, Associate Professor at WULS-SGGW	
Academic discipline/disciplines	Food Technology and Human Nutrition
Professional development (degrees and titles) in chronological order	<ol style="list-style-type: none"> 1. MSc. – 2001. 2. Dr Eng. - 2005. 3. Dr hab. Eng. – 2019.
Most important publications/ patents in the last 3 years (maximum 10)	<ol style="list-style-type: none"> 1. Laribi A., Bryś J., Selmania A., Ikhlef A., Btaïche I., Mouzai A., Zieniuk B., Bouchedja D.: Impact of Ethanol Stress on <i>Yarrowia lipolytica</i> for Sustainable Bioconversion of Agro-Food Oil Wastes into Lipases and Lipids, <i>Foods, Molecular Diversity Preservation International (MDPI)</i>, vol. 14, nr 21, 2025, Numer artykułu: 3696, s. 1-21, DOI:10.3390/foods14213696 2. Siol M., Witkowska B., Mańko-Jurkowska D., Makouei S., Bryś J.: Comprehensive Evaluation of the Nutritional Quality of Stored Watermelon Seed Oils, <i>Applied Sciences-Basel, MDPI</i>, vol. 15, nr 2, 2025, Numer artykułu: 830, s. 1-16, DOI:10.3390/app15020830 3. Siol M., Piasecka I., Mańko-Jurkowska D., Górska A., Bryś J.: Optimization and Impact of Ultrasound-Assisted Extraction on Pomegranate Seed Oil Quality: A Comparative Study of Bioactive Potential and Oxidation Parameters, <i>Molecules, MDPI</i>, vol. 30, nr 8, 2025, Numer artykułu: 1837, s. 1-22, DOI:10.3390/molecules30081837 4. Siol M., Mańko-Jurkowska D., Stanaszek I., Zieniuk B., Bryś A., Bryś J.: Toward Functional Oil Blends: Physicochemical and Nutritional Evaluation of Rapeseed–Hazelnut Oil Mixtures, <i>Foods, Molecular Diversity Preservation International (MDPI)</i>, vol. 14, nr 23, 2025, Numer artykułu: 4008, s. 1-22, DOI:10.3390/foods14234008 5. Zielińska-Pukos M., Bryś J., Hamułka J.: Maternal adiposity moderates associations between dietary, serum, and human milk n-3 and n-6 PUFA, <i>Scientific Reports, Nature Publishing Group</i>, vol. 15, nr 1, 2025, Numer artykułu: 16489, s. 1-17, DOI:10.1038/s41598-025-00940-4 6. Bandara B., Louis-Gavet C., Bryś J., Mańko-Jurkowska D., Górska A., Brzezińska R., Siol M., Makouei S., Palani B., Obranović M., Koczoń P.: Enzymatic Interesterification of Coconut and Hemp Oil Mixtures to Obtain Modified Structured Lipids, <i>Foods, Molecular Diversity Preservation International (MDPI)</i>, vol. 13, nr 17, 2024, Numer artykułu: 2722, s. 1-16, DOI:10.3390/foods13172722 7. Makouei S., Bryś J., Małajowicz J., Koczoń P., Siol M., Palani B., Bryś A., Obranović M., Mikolčević S., Gruczyńska-Sękowska E.: A Comprehensive Review of Silymarin Extraction and Liposomal Encapsulation Techniques for Potential Applications in Food, <i>Applied Sciences-Basel, MDPI</i>, vol. 14, nr 18, 2024, Numer artykułu: 8477, s. 1-22, DOI:10.3390/app14188477 8. Palani B., Siol M., Makouei S., Bryś J., Gruczyńska-Sękowska E., Koczoń P.: Investigation of Oil Extracted from Roasted and Unroasted Oats with Use of Chemometrics, <i>Applied Sciences-Basel, MDPI</i>, vol. 14, nr 24, 2024, Numer artykułu: 11481, s. 1-16, DOI:10.3390/app142411481 9. Siol M., Chołuj N., Mańko-Jurkowska D., Bryś J.: Assessment of the Stability and Nutritional Quality of Hemp Oil and Pumpkin Seed Oil Blends, <i>Foods, Molecular Diversity Preservation International (MDPI)</i>, vol. 13, nr 23, 2024, Numer artykułu: 3813, s. 1-22, DOI:10.3390/foods13233813

	10. Siol M., Dudek A., Bryś J. , Mańko-Jurkowska D., Gruczyńska-Sękowska E., Makouei S., Palani B., Obranović M., Koczón P.: Chromatographic and Thermal Characteristics, and Hydrolytic and Oxidative Stability of Commercial Pomegranate Seed Oil, Foods, Molecular Diversity Preservation International (MDPI), vol. 13, nr 9, 2024, Numer artykułu: 1370, s. 1-16, DOI:10.3390/foods13091370
Experience in work with doctoral students (defended doctoral dissertations, initiated doctoral procedures) in chronological order	<ol style="list-style-type: none"> 1. Auxiliary supervisor in the doctoral proceedings of Ms Hanna Ciemniewska-Żytkiewicz. Doctoral proceedings opened: 13 June 2014. Date of defence: 7 July 2016. 2. Auxiliary supervisor in the doctoral proceedings of Ms Justyna Kadzińska. Doctoral proceedings opened: 2 December 2017. Date of defence: 26 October 2023. 3. Auxiliary supervisor of Mr Bharani Kumar Palani, 4th-year PhD candidate at the SGGW Doctoral School. 4. Doctoral supervisor of Mr Sina Makouie, 3rd-year PhD candidate at the SGGW Doctoral School. 5. Doctoral supervisor of Ms Marta Siol, 3rd-year PhD candidate at the SGGW Doctoral School.
Achievements in the area of projects/grants (in the last 5 years)	<ol style="list-style-type: none"> 1. Implementation of a project under the SGGW Own Scholarship Fund at the Laboratory for Oil and Fat Technology, Department of Food Engineering, Faculty of Food Technology and Biotechnology, University of Zagreb. Project duration: 25 June 2020 – 25 September 2020. 2. Participation in project no. 101182843 (HORIZON-MSCA-2023-SE-01), "Scientific Exchange for the Evaluation of the Quality and Risk of Food Obtained through Innovative Processing and Packaging Technologies (SEQUR FOOD)." Project duration: 1 January 2025 – 31 December 2028.
Subject area of the research project for which the candidate student is being recruited	<p>The aim of the thesis is to design and characterize a new generation of structured lipids with personalized nutritional and functional properties, aligned with current trends in functional food, clean label, and nutrition design. The project focuses on developing innovative lipid matrices based on selected vegetable oils and medium-chain triglyceride (MCT) fractions through precise "engineering" of the fatty acid composition and distribution within triacylglycerol molecules. In practice, this involves designing fats with targeted metabolic effects, enhanced bioavailability of bioactive compounds, and optimized technological functionality.</p> <p>The study will employ enzymatic interesterification catalyzed by selective lipases – a modern, sustainable, and environmentally friendly modification method consistent with the principles of green technology and bioprocess engineering.</p>
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