

Name and surname:	Agnieszka Nawirska-Olszańska
Academic Degree	dr hab. inż. (DSc.)
Institute/Department	Department of Fruit, Vegetable and Plant Nutraceutical Technology
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UPWr Base of Knowledge - link	Agnieszka Nawirska-Olszańska (upwr.edu.pl)
Researchgate:	https://www.researchgate.net/profile/Agnieszka_Nawirska-Olszanska
Personal website / Working group website:	
Projects in last 5 years (chronological; with distinction into PI (kierownik) and RF (wykonawca)):	
Do you plan to engage support of second supervisor or auxiliary supervisor?	YES
	Auxiliary supervisor
Name and surname	Marta Czaplicka
Academic Degree	dr inż. (Dr. Eng.)
Faculty, Institute/Department	Department of Horticulture
e-mail address:	marta.czaplicka@upwr.edu.pl
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UPWr Base of Knowledge - link or most important publications from last 3 year (JCR) / patents from last 3 years (maximum 5):	Marta Czaplicka-Pędzich (upwr.edu.pl)
Researchgate:	https://www.researchgate.net/profile/Marta_Czaplicka2
Personal website / Working group website:	
Projects in last 5 years (chronological; with distinction into PI (kierownik) and RF (wykonawca)):	<p>01.10.2019 - 30.08.2022 IQ GRAPE "Innovative technology for the production and bottling of grape wine and the method of production organization as factors for increasing the quality of locally produced wine products" Wrocław University of Environmental and Life Sciences; Faculty of Life Sciences and Technology, Department of Horticulture, Institute of Economics, head : Dr. Tomasz Pilawka, Dr. Marta Czaplicka-Pędzich amount: 4 700 000 PLN</p> <p>from 2019 Best4soil.eu - European project, financed under the Horyzont2020 funds, function: facilitator</p> <p>01.10.2017 - 31.12.2020 "Hydrobox2.0 - innovative technology supporting water saving and plant vegetation" Measure 4.1 "Research and development works", Sub-measure 4.1.4 "Application projects" Project no. POIR.04.01.04-00-0061 / 16 Project value: PLN 2 657 500.73, including the maximum amount of funding for the University of Life Sciences in Wrocław: PLN 2 374 487.76. Function - performer</p>
Research topic and funding	
1) PhD topic:	Influence of vacuum impregnation on the nutritional properties of selected fruit and vegetables dried with various methods
2) Research discipline in Doctoral School	Nutrition and Food Technology
3) Short description of the research problem to be solved in the PhD:	The proposed research will be aimed at developing a method that allows to obtain innovative, dried products based on selected vegetables. During preservation, the bioactive compounds contained in the raw material are highly degraded. This unfavorable effect can be significantly reduced by using a pre-treatment, which is vacuum impregnation. At the same time, it allows the addition of additional substances present in the impregnating liquid to the material. The composition of the impregnating liquid can be designed in such a way that, in addition to increasing the nutritional value, also favorable taste and aroma effects are obtained. The color of drought, water activity, dry weight and kinetics of rehydration will be determined using instrumental methods. The main determinant of the value of the obtained dried material will be the retained content of bioactive compounds and antioxidant activity. The obtained products will be subjected to a sensory analysis, taking into account the intensity of hardness, crunchiness, color, taste and smell. The aim of the research will be to assess the possibility of using the vacuum impregnation method to introduce into the tissue of kale, broccoli and eggplants, ingredients derived from natural vegetable juices, probiotics or microelements, and then fix the modified vegetables using a selected drying technique, ensuring a high degree of preservation of bioactive compounds
4) Professional skills for PhD candidate (e.g. master program, specializations, softwares, language, analytical techniques):	The candidate is to have completed engineering and master's studies in biotechnology or food technology. He is to have fluent knowledge of computer programs: Word, Excel and statistical programs, eg Statistica, knowledge of English at B2 level. The candidate is to know the basic analytical techniques in the field of drying, food analysis and organoleptic evaluation. The candidate is also supposed to have a background in working with high-class analytical equipment, e.g. spectrophotometer, HPLC. A candidate for a doctoral school is also expected to demonstrate diligence in the tasks performed, creativity, ability to cooperate in a team and commitment to research.
5) Details of the project to support PhD research	
a) Project title:	Study of the variability of the chemical composition, the content of bioactive compounds and the antioxidant activity of hybrid grape varieties
b) Agreement number:	2020/39/O/NZ9/00596
c) Number of months in the project to support PhD (in months; starting from 1st of October 2021):	36
6) Project website:	