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UPWr Base of Knowledge - link:	https://bazawiedzy.upwr.edu.pl/info/author/JPWrdc7b8146ee3404388e919cda02deef?r=author&tab=&title=Profil%2Bosoby%2B%25E2%2580%2593%2BAmeta%2BWojdy%25C5%2582o%2B%25E2%2580%2593%2BUniwersytet%2BPrzyrodniczy%2Bwe%2BWroc%25C5%2582awiu&lang=pl
Researchgate:	
Personal website / Working group website:	
Participation in projects in last 5 years (chronological; with distinction into PI (kierownik) and RF (wykonawca)):	<p>The role of interactions between Sorbus domestica L. phytonutrients on shaping food with programmed health-promoting properties, bioavailability, and bioaccessibility. NCN, 2024-2028, PI</p> <p>The development of functional, high-protein vegetable pastes in a breakthrough on the food market dedicated to people at risk of diet-related diseases and inflammations of the body. NCBR, NUTRITECH I-002C/22, 2023-2026, PI</p> <p>Leaves of fruits trees as donors of natural bioactive substances used in preventive strategies of selected civilization diseases. NCN, 2019-2024, PI</p>
Do you plan to engage support of second supervisor or auxiliary supervisor?	YES
	Auxiliary supervisor
Name and surname:	Joanna Chmielewska
Academic Degree:	dr inż. (Dr. Eng.)
Faculty, Institute/Department:	Department of Fermentation and Cereals Technology
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ORCID:	https://orcid.org/0000-0001-8163-7342
UPWr Base of Knowledge - link or most important publications from last 3 year (JCR) / patents from last 3 years (maximum 5):	https://bazawiedzy.upwr.edu.pl/info.seam?afil=&ps=20&id=UPWr65fc51eeae3b47268968d5e1762f48df&lang=en&pn=1&cid=77647
Researchgate:	
Personal website / Working group website:	
Projects in last 5 years (chronological; with distinction into PI (kierownik) and RF (wykonawca)):	-
PhD topic:	Technological aspects of the production of fermented low alcoholic beverages as mead
Research discipline in Doctoral School:	Nutrition and Food Technology
Short description of the research problem to be solved in the PhD (minimum 1000 characters):	<p>Mead is a traditional alcoholic beverage containing an alcoholic strength, by volume, between 8% and 18%, which results from the alcoholic fermentation of diluted honey by yeasts. It is a popular beverage in eastern Europe and in the Baltic states, being also widely consumed in European country.</p> <p>Mead is an alcoholic beverage made by fermenting a mixture of honey and water. Depending on the proportion to which honey is diluted, different types of mead are obtained. Worts that contain a high concentration of sugar are prepared in fed-batch, successively adding appropriate portions of honey to avoid premature fermentation arrest due to excessive osmotic pressure. During the fermentative process, several problems may occur, being the most common the inability to achieve the desired alcoholic content, the existence of long and stuck fermentations and the heterogeneity of the final product. In addition, yeast re-fermentations and/or bacterial secondary fermentations may occur, resulting in the production of lactic and acetic acid and increasing the production of undesirable volatile esters triggered in undesirable aroma as off-flavors (i.e. ethyl acetate, octanoic acid and hexanoic acid). The combination of these compounds modifies the sensory quality of mead, specifically the aroma and flavor, making it unpleasant.</p> <p>To enhance its character and complexity, a variety of fruits, vegetables, herbs, hops, flower or spices may be added to, during, or after fermentation. Traditional mead is produced only small amounts of spices, fruits, or herbs are permitted without ever overpowering the honey flavor or aroma.</p> <p>The main aim of this PhD dissertation will be to assess the impact of type of honey and plant additives and technological aspects (i.e. yeast strain selection, fermentation and postfermentation conditions) on designing new, innovative, functional mead products with targeted health-promoting properties with acceptable sensory and aroma properties. The secondary aim of this dissertation will be to determine the multidimensional role of phyto- and nutrients (i.e. polyphenolic compounds, vitamins, amino acids, minerals) new products in shaping the health-promoting potential.</p>
Professional skills for PhD candidate (e.g. master program, specializations, softwares, language, analytical techniques, minimum 500 characters):	<ul style="list-style-type: none"> •master of Food Science or Pharmacia •knowledge of the basic techniques used in analysis as chromatographic and spectrophotometric method •knowledge of the methods of analysis of bioactivity, especially antioxidant property and others •knowledge food technology, especially fermentation technology of alcoholic beverages
a) Project title:	none
b) Agreement number:	none
c) Number of months in the project to support PhD student (in months; starting from 1st of October 2024):	0
Project website:	