

Name and surname:	Iwona Gruss
Academic Degree:	dr hab. (DSc.)
Institute/Department:	Department of Plant Protection
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UPWr Base of Knowledge - link:	https://bazawiedzy.upwr.edu.pl/info/autor/UPWr52de048f59f449d48f18e0f1e6eb8ce9/
Researchgate:	https://www.researchgate.net/profile/Iwona-Gruss-2
Personal website / Working group website:	
Participation in projects in last 5 years (chronological; with distinction into PI (kierownik) and RF (wykonawca)):	<p>"Development of a technology for the use of ozonated water in the cultivation and storage of asparagus, which will significantly reduce the use of plant protection products, and thus protect the soil environment and obtain a significantly improved product in the form of asparagus shoots free from microorganisms, their toxic metabolites and pesticide residues, with longer shelf life" under the aid agreement No. 00024.DDD.6509.00088.2022.15 under Measure M16 "Cooperation" Rural Development Program 2014-2020; Function: RF</p> <p>Innovative methods of sheep breeding and breeding in the light of changing conditions climate change in Lower Silesia" implemented under Measure M16 "Cooperation" RDP 2014-2020 grant agreement no. 00029.DDD.6509.00097.2019.01 Function: RF.</p> <p>The impact of climate change on soil organisms and plant communities in the conditions of mountain pastures. Project N040/0005/21: Support for Leading Research Teams of Wrocław University of Environmental and Live Sciences. Function: PI.</p>
Do you plan to engage support of second supervisor or auxiliary supervisor?	YES
	Auxiliary supervisor
Name and surname:	Marta Czarniecka-Wiera
Academic Degree:	dr (Dr.)
Faculty, Institute/Department:	Institute of Agroecology and Plant Production
e-mail address:	marta.czarniecka-wiera@upwr.edu.pl
ORCID:	0000-0003-3294-5853
UPWr Base of Knowledge - link or most important publications from last 3 year (JCR) / patents from last 3 years (maximum 5):	<p>Czarniecka-Wiera, M., Szymura, T., & Kaćki, Z. (2020). Understanding the importance of spatial scale in the patterns of grassland invasions. <i>Science of the Total Environment</i>, 727, null. https://doi.org/10.1016/j.scitotenv.2020.138669 Czarniecka-Wiera, M., Kaćki, Z., Chytrý, M., & Palpurina, S. (2019). Diversity loss in grasslands due to the increasing dominance of alien and native competitive herbs. <i>Biodiversity and Conservation</i>, 28, 2781–2796. https://doi.org/10.1007/s10531-019-01794-9</p>
Researchgate:	https://www.researchgate.net/profile/Marta-Czarniecka-Wiera
Personal website / Working group website:	
Projects in last 5 years (chronological; with distinction into PI (kierownik) and RF (wykonawca)):	The importance of perennial lupine (<i>Lupinus polyphyllus</i>) for biodiversity and productivity of meadows on the example of the Sudetes. [N060/0007/24], start date 17/01/2024, end date 31/12/2025, in progress; PI
PhD topic:	Impact of invasive plants on soil invertebrate communities and soil functions in grassland ecosystems
Research discipline in Doctoral School:	Agriculture and Horticulture
Short description of the research problem to be solved in the PhD (minimum 1000 characters):	<p>Invasive plants have the potential to alter the composition and structure of soil invertebrate communities, which are integral components of terrestrial ecosystems. Understanding the impact on soil invertebrates contributes to biodiversity conservation efforts, as these organisms play crucial roles in nutrient cycling, organic matter decomposition, and overall ecosystem health. Especially since the mechanisms of invasiveness of some of these plants are very complex and not fully known.</p> <p>Invasive plants can disrupt soil ecosystems by outcompeting native vegetation and altering habitat conditions. Investigating the impact on soil invertebrates helps assess the potential cascading effects on the functioning of the environment, influencing plant-soil interactions and ecosystem stability. Additionally, soil invertebrates are essential to maintaining soil fertility and structure, influencing nutrient availability for crops. Understanding how invasive plants affect soil invertebrate communities provides valuable insight into potential consequences for agricultural productivity and sustainability.</p> <p>In this proposal, field and mesocosm studies are planned in order to explain mechanisms linking invasive plants, soil invertebrates, and soil functions.</p>
Professional skills for PhD candidate (e.g. master program, specializations, softwares, language, analytical techniques, minimum 500 characters):	<ul style="list-style-type: none"> - The pH candidate should be able to carry out research in the laboratory and in field conditions. - Ph.D. in environmental, agricultural, or biological sciences. - Proficient in conducting experimental laboratory and fieldwork. Experience in working with microorganisms and arthropods would be particularly valuable . - Driving licenses would be very valuable for fieldwork activities and sample collection. - Expertise in writing scientific papers and proficient in data analysis. - Excellent proficiency in spoken and written English. - Demonstrated experience in data analysis. - Strong interpersonal and leadership skills. The PhD student should collaborate with other team members - Effective self-management and work habits.
a) Project title:	0
b) Agreement number:	0
c) Number of months in the project to support PhD student (in months; starting from 1st of October 2024):	0
Project website:	