

Candidate supervisor's information summary form
maximum 2 pages – it should be a summary of most important achievements

Name and surname, degree, title: dr hab. Katarzyna Bączek, assistant professor	
Scientific discipline/s	Agriculture and horticulture
Professional development (scientific degrees and titles) chronologically	MSc degree (2002) PhD in agricultural sciences (2010) Postdoctoral degree (habilitation) in agricultural sciences in the field of horticulture (2018)
Most important publications/patens from the last 3 years (max. 10)	Najważniejsze publikacje z ostatnich 3 lat (2020-2022): 1. BĄCZEK K. , KOSAKOWSKA O., BOCZKOWSKA M. BOLC P., CHMIELECKI R., PIÓRO-JABRUCKA E., RAJ K., WĘGLARZ Z. 2022 . Intraspecific variability of wild-growing common valerian (<i>Valeriana officinalis</i> L.). <i>Plants</i> 11(24), 3455 (IF=4.568). 2. EL-ANSARI M., ABDEL-LATIF R.R., BĄCZEK K. , AWAD H.M., SHARAF M. 2022 . A new dimeric flavonol glucoside and other flavonoids from the cytotoxic methanolic extract of the flowers of <i>Filipendula vulgaris</i> collected in Poland. <i>Chemistry of Natural Compounds</i> 58(3): 433-437 (IF=0.830). 3. PADUCH-CICHAL E., MIRZWA-MRÓZ E., WOJCIECHOWSKA P., BĄCZEK K. , KOSAKOWSKA O., WĘGLARZ Z., SZYNDEL M.S. 2022 . Antiviral activity of selected essential oils against Cucumber mosaic virus. <i>Plants</i> 12(1), 18 (IF=4.568). 4. WĘGLARZ Z., KOSAKOWSKA O., PIÓRO-JABRUCKA E., PRZYBYŁ J.L., GNIEWOSZ M., KRAŚNIEWSKA K., SZYNDEL M.S., COSTA R., BĄCZEK K. 2022 . Antioxidant and antibacterial activity of <i>Helichrysum italicum</i> (Roth) G. Don. from Central Europe. <i>Pharmaceuticals</i> 15: 735 (IF=5.215). 5. KOSAKOWSKA O., WĘGLARZ Z., PIÓRO-JABRUCKA E., PRZYBYŁ J.L., KRAŚNIEWSKA K., GNIEWOSZ M., BĄCZEK K. 2021 . Antioxidant and antibacterial activity of essential oils and hydroethanolic extracts of Greek oregano (<i>O. vulgare</i> L. subsp. <i>hirtum</i> (Link) letsvaart) and common oregano (<i>O. vulgare</i> L. subsp. <i>vulgare</i>). <i>Molecules</i> 26: 988 (IF=3.060) 6. KOSAKOWSKA O., WĘGLARZ Z., BĄCZEK K. 2021 . The effect of open field and foil tunnel on yield and quality of the common thyme (<i>Thymus vulgaris</i> L.) in organic farming. <i>Agronomy</i> 11: 197. 7. BĄCZEK K. , PRZYBYŁ J.L., KOSAKOWSKA O., WĘGLARZ Z. 2021 . Introducing Wild-Growing Medicinal Plant into Cultivation: Dropwort (<i>Filipendula vulgaris</i> Moench) – A Rich Source of Phenolic Compounds. In: Ekiert K.G., Ramawat K.G., Arora J. (Eds.). <i>Medicinal Plants: Domestication, Biotechnology and Regional Importance. Sustainable Development and Biodiversity</i> 28. Springer Nature Switzerland. DOI: https://doi.org/10.1007/978-3-030-74779-4_2 8. SZYMBORSKA-SANDHU I., PRZYBYŁ J.L., KOSAKOWSKA O., BĄCZEK K. , WĘGLARZ Z. 2020 . Chemical Diversity of Bastard Balm (<i>Melittis melisophyllum</i> L.) as Affected by Plant Development. <i>Molecules</i> : 25(10): 2421 (IF=3.060)

	<p>9. SZYMBORSKA-SANDHU I., PRZYBYŁ J.L., PIÓRO-JABRUCKA E., JĘDRZEJUK A., WĘGLARZ Z., BĄCZEK K. 2020. Effect of shading on development, yield and quality of bastard balm herb (<i>Melittis melissophyllum</i> L.). <i>Molecules</i> 25: 2142 (IF=3.060)</p> <p>10. BĄCZEK K., KOSAKOWSKA O., PIÓRO-JABRUCKA E., PRZYBYŁ J.L., SZYMONA J., WĘGLARZ Z. 2020. Dziko rosnące rośliny lecznicze źródłem surowców ekologicznych (Wild-growing medicinal plants as a source of organic raw materials). Wydawnictwo SGGW, Warszawa.</p>
<p>Experience in work with PhD students (defended dissertations, initiated dissertation procedures) chronologically</p>	<p>Supervisor of dissertation, defended in 2021. Izabela Szymborska-Sandhu. Developmental and chemical characteristics of bastard balm (<i>Melittis melissophyllum</i> L.) in the conditions of its cultivation. Currently the supervisor of two doctoral students of the Doctoral School of WUL-SGGW (recruitment 2021/2022)</p>
<p>Project/grants accomplishments (from the last 10 years)</p>	<p><u>Manager of 14 projects, including:</u></p> <ul style="list-style-type: none"> • 1 National Science Center (NCN) project (2011-2014 own research project) • 13 projects commissioned by the Ministry of Agriculture and Rural Development (9 – in the field of organic farming, 2 -in the frame of biological progress in plant production, 2 - in the field of plant genetic resources protection), including 3 currently carried out. <p><u>Manager of 3 implementation projects (KZL)</u> commissioned by Herbapol Lublin, including.</p> <p><u>The main contractor of 10 projects, including:</u></p> <ul style="list-style-type: none"> • 1 NCBiR project (2007-2010 research and development project) • 1 PARP project (2018 research project) • 1 NCN project (2008-2010 research project) • 7 projects commissioned by the Ministry of Agriculture and Rural Development (5 in the field of organic farming, 1 in the field of biological progress in plant production, 1 in the field of plant genetic resources protection) <p>All of the above projects concern / concerned wild-growing and cultivated medicinal and aromatic plant species.</p>
<p>Theme scope – research problem – for the solving of which the PhD student is sought</p>	<p>Research on the influence of genetic, developmental and environmental factors on the yield and quality of selected medicinal and aromatic plants, both domestic and of foreign origin. The works also concern the introduction of rare, wild-growing species into cultivation, including issues related to the determination of the range of their variability at the species and genus level. The research will be conducted in situ and ex situ. Particular attention will be paid to the accumulation and composition of biologically active compounds in raw materials obtained from these plants, intended for use in the food and phytopharmaceutical industries. An important element of the research will be evaluation of the raw materials with the use of modern extraction and analytical methods, including instrumental analysis.</p>
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