

### Candidate supervisor's information summary form

maximum 2 pages – it should be a summary of the most important achievements

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| Name and surname, degree, title: Agata Jędrzejuk, P.hD., Professor of University |  |
| Discipline/ disciplines of science   | Agriculture and Horticulture/Horticulture  |
| Professional development (degrees and titles) in chronological order             | <p>M.Sc. in Horticulture - 28.06.2001</p> <p>Doctor of Agricultural Sciences - 18.10.2006</p> <p>Postdoctoral Doctor of Agricultural Sciences in the discipline Horticulture - 09.05.2018</p> <p>Professor of the University - 01.10.2021</p>  |
| Most important publications/patens over the last 3 years (maximum 10)            | <p>Jędrzejuk, A., Bator, M., Werno, A., Karkoszka, Ł., Kuźma, N., Zaraś – Januszkievicz, E., Budzyński, R. 2022. Development of an Algorithm to Indicate the Right Moment of Plant Watering Using the Analysis of Plant Biomasses Based on Dahlia x hybrida. Sustainability 2022, 14, 5165. <a href="https://doi.org/10.3390/su14095165">https://doi.org/10.3390/su14095165</a></p> <p>N. Kuźma, J. Rabiza-SŚwider, E. Skutnik and A. Jędrzejuk. 2022. Light spectrum affects growth and flowering in petunia 'Dark Red'. Acta Hortic. 1337. ISHS 2022. DOI 10.17660/ActaHortic.2022.1337.47. Proc. IX International Symposium on Light in Horticulture. Eds.: K.-J. Bergstrand and M.T. Naznin.</p> <p>Jędrzejuk A., Kuźma N. Orłowski A., Budzyński R., Gehl Ch., Serek M. 2023. Mechanical Stimulation Decreases Auxin and Gibberellic Acid Synthesis but Does Not Affect Auxin Transport in Axillary Buds; It Also Stimulates Peroxidase Activity in Petunia x atkinsiana. Molecules. DOI 10.3390/molecules28062714</p> <p>Jędrzejuk Agata, Kuźma Natalia, Nawrot Kamil : Mechanical [i in.] stimulation affects growth dynamics, IAA content and activity of POD and IAA oxidase in Petunia x atkinsiana, Scientia Horticulturae, 2020, vol. 274, s.1-7, DOI:10.1016/j.scienta.2020.109661</p> <p>Rabiza-Świder Julita, Skutnik Ewa, Jędrzejuk Agata : Nanosilver and sucrose delay the senescence of cut snapdragon flowers, Postharvest Biology and Technology, 2020, vol. 165, s.1-13, r DOI: 10.1016/j.postharvbio.2020.111165</p> <p>Rabiza-Świder Julita, Skutnik Ewa, Jędrzejuk Agata : Postharvest treatments improve quality of cut peony flowers, Agronomy, 2020, vol. 10, nr 10, s.1-19,. DOI:10.3390/agronomy10101583</p> <p>Skutnik Ewa, Jędrzejuk Agata, Rabiza-Świder Julita : Nanosilver as a novel biocide for control of senescence in garden cosmos, Scientific Reports, 2020, vol. 10, s.1-9, DOI:10.1038/s41598-020-67098-z</p> <p>Skutnik Ewa, Rabiza-Świder Julita, Jędrzejuk Agata : The effect of the long-term cold storage and preservatives on senescence of cut herbaceous peony flowers, Agronomy, 2020, vol. 10, nr 11, s.1-14, DOI:10.3390/agronomy10111631</p> |

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| Experience in work with doctoral students (defended doctoral dissertations, doctoral programmes opened) in chronological order | D. thesis supervisor Julia Rochala, M.Sc.: The influence of post-harvest treatments on selected aspects of the ageing of cut flowers (Clematis sp., Cosmos bipinnatus, Antirrhinum majus)  |
| Project/grants achievements (from the last 10 years)   | <p>2009 - 2012 principal investigator of the research grant funded by the Ministry of Science and Higher Education "Regulation of ageing of cut flowers of clematis (Clematis sp.) and lilac (Syringa vulgaris L.)" No NN310089336</p> <p>2021 – principal investigator of a research grant by the Deutscher Akademischer Austausch Dienst (DAAD) at the Gottfried Wilhelm Leibniz University, Hannover: Detection of auxin synthesis and transport in plants subjected to mechanical stimulation (MS) by using immunolocalization method</p> <p>2021 – principal investigator in mini grant within the frames of Incubator 4.0: Mechanical conditioning as an environmentally safe method of growth control of plants (ornamental, herbs and vegetables) grown under covers</p> |
| Topic – research problem – for which the candidate supervisor seeks a doctoral student   | <ol style="list-style-type: none"> <li>1. Globally, the increasing scarcity of water resources is a key challenge for crop production. Water costs in nursery and greenhouse crop production can be quite high and increase rapidly in the short term in major regions of Europe. The need for sustainable water use in crop production has mobilized the scientific community to develop new methods for monitoring plant water stress and substrate moisture.</li> <li>2. The development of groups of plants that grow naturally in urban areas that can best withstand urban stresses, and thus developing possibilities for their use in urban greenery.</li> </ol>   |
| Basic expectations towards a candidate for a PhD student   | <p>Basic knowledge of plant anatomy, physiology and biochemistry.</p> <p>Knowledge of plant adaptation to water deficit stress.</p> <p>Knowledge of stress markers and their role in plants</p>  |
| <p><u>Contact details:</u></p> <p>Faulty/Institute</p> <p>E-mail address</p> <p>Phone.</p>                                     | <p>Institute of Horticulture Sciences, Department of Environmental Protection and Dendrology</p> <p><a href="mailto:agata_jedrzejuk@sggw.edu.pl">agata_jedrzejuk@sggw.edu.pl</a></p> <p>2259320 65</p>   |