

**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. Arkadiusz Przybysz, assistant professor	
Discipline/ disciplines of science	Agriculture and horticulture
Professional development (degrees and titles) in chronological order	MSc degree (2005) PhD in agricultural sciences (2009) Postdoctoral degree (habilitation) in agricultural sciences in the field of horticulture (2019)
Most important publications/patens over the last 3 years (maximum 10)	<p><b>Przybysz A.</b>, Popek R., Stankiewicz-Kosyl M., Zhu C.Y., Małecka-Przybysz M., Maulidyawati T., Mikowska K., Deluga D., Grizuk K., Sokalski-Wieczorek J., Wolszczak K., Wińska-Krysiak M. 2021. Where the trees cannot grow – particulate matter accumulation by urban meadows. Science of The Total Environment – accepted for publication</p> <p><b>Przybysz A.</b>, Wińska-Krysiak M., Małecka-Przybysz M., Stankiewicz-Kosyl M., Skwara M., Kłos A., Kowalczyk S., Jarocka K., Sikorski P. 2020. Urban wastelands: On the frontline between air pollution sources and residential areas. Science of The Total Environment 721, 137695</p> <p>Zhu C.Y, <b>Przybysz A.</b>, Chen Y., Guo H.J., Chen Y.Y., Zeng Y. 2019. Effect of spatial heterogeneity of plant communities on air PM10 and PM2. 5 in an urban forest park in Wuhan, China. Urban Forestry &amp; Urban Greening 46, 126487</p> <p>Baraldi R., <b>Przybysz A.</b>, Facini O., Pierdonà L., Carriero G., Bertazza G., Neri L. 2019. Impact of drought and salinity on sweetgum tree (<i>Liquidambar styraciflua</i> L.): understanding tree ecophysiological responses in the urban context. Forests 10(11), 1032</p> <p>Popek R., Haynes A., <b>Przybysz A.</b>, Robinson S.A. 2019. How much does weather matter? Effects of rain and wind on PM accumulation by four species of Australian native trees. Atmosphere 10(10), 633</p> <p><b>Przybysz A.</b>, Nersisyan G., Gawroński S.W. 2019. Urban greenery removes particulate matter and trace elements from ambient air during winter. Environmental Science and Pollution Research 26(1), 473-482</p>
Experience in work with doctoral students (defended doctoral dissertations, doctoral	None

programmes opened) in chronological order	
Project/grants achievements (from the last 10 years)	<p>„Inventory and determination of the reclamation possibility of selected wasteland in Warsaw for the purposes of its use in the urban green area system”, 2017-2019, funded by Greenery Board of the Capital City of Warsaw (11/PN/2017, nr: 44/2017/IZW). Coordinator and performer of 2 research tasks</p> <p>„Warsaw Plant Health Initiative”, 2011-2015, project funded by the 7th Framework Program of the European Community (nr: FP7-REGPOT-2011-1-286093). Performer</p> <p>„Response of isoprene emission and photosynthetic apparatus to urban stresses in sweet gum (<i>Liquidambar styraciflua</i> L.)” project funded by European project ExpeER and carried out in IBIMET, CNR, Bologna, Italy, 2014. Coordinator and performer</p> <p>“Improving the nutritional value of leaf sprouts and vegetables by enriching them with valuable elements for human health”, 2010-2015, project accompanying COST Action FA0905, funded by KBN/NCN (nr: #799/N-COST/2010/0). Performer</p> <p>“Phytoremediation of air pollution as a tool of human health risk reduction”, 2008-2011, project funded by Polish-Norwegian Research Found Grants (number: PNRF-193-AI-1/07, #13/2008). Performer.</p>
Topic – research problem – for which the candidate supervisor seeks a doctoral student	<p>The impact of urban greenery on air quality in the cities:</p> <ol style="list-style-type: none"> <li>1. Effect of environmental factors, particularly rain (different intensity, frequency and pH) and wind, on the retention of particulate matter on plants foliage;</li> <li>2. Effect of urban growing conditions (drought, increased salinity, soil and air pollution, poor soil quality, etc.) on the accumulation of particulate matter by plants (trees, shrubs, herbs);</li> <li>3. Efficiency of particulate matter accumulation by various meadow communities and lawns located in the immediate vicinity of the road;</li> <li>4. Accumulation of microplastics by urban plants, selecting the most important features of plants that increase the efficiency of this process.</li> </ol>
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