

### Candidate supervisor's information summary form

Name and surname, degree, title: <b>dr hab. Katarzyna Samborska, prof. SGGW</b>	
Discipline/ disciplines of science	Food technology and nutrition
Professional development (degrees and titles) in chronological order	<p>2017 - postdoctoral degree (habilitation) in agricultural sciences in the field of food technology and nutrition, Faculty of Food Sciences, Warsaw University of Life Sciences</p> <p>2004 - PhD in agricultural sciences in the field of food technology and nutrition, Faculty of Food Technology, Warsaw University of Life Sciences</p>
Most important publications/patens over the last 3 years (maximum 10)	<ol style="list-style-type: none"> <li>1. <b>Samborska K</b>, Boostani S, Geranpour M, Hosseini H, Dima C, Khoshnoudi-Nia S, Rostamabadi H, Reza Falsafi S, Shaddel R, Akbari-Alavijeh S, Jafari SM. 2021. Green biopolymers from by-products as wall materials for spray drying microencapsulation of phytochemicals. <i>Trends in Food Science and Technology</i>. 108, 297-325.</li> <li>2. <b>Samborska K</b>, Wiktor A, Jedlińska A, Matwijczuk A, Jamróz W, Skwarczyńska-Maj K, Kielczewski D, Tułodziecki M, Błażowski Ł, Witrowa-Rajchert D. 2019. Development and characterization of physical properties of honey-rich powder. <i>Food and Bioproducts Processing</i>, 115, 78-86</li> <li>3. <b>Samborska K</b>, Jedlińska A, Wiktor A, Derewiaka D, Wołosiak R, Matwijczuk A, Jamróz W, Skwarczyńska-Maj K, Kielczewski D, Błażowski Ł, Tułodziecki M, Witrowa-Rajchert D. 2019. The effect of low temperature spray drying with dehumidified air on phenolic compounds, antioxidant activity and aroma</li> <li>4. <b>Samborska K</b>, Bonikowski R, Kalembe D, Barańska A, Jedlińska A, Edris A. 2021. Volatile aroma compounds of sugarcane molasses as affected by spray drying at low and high temperature. <i>LWT - Food Science and Technology</i>, 111288</li> <li>5. Jafari SM, Arpagaus C, Cerqueira M, <b>Samborska K</b>. 2021. Nano spray drying of food ingredients; materials, processing and applications. <i>Trends in Food Science and Technology</i>, 109, 632–646</li> <li>6. Jedlińska, A., <b>Samborska, K.</b>, Wiktor, A., Balik, M., Derewiaka, D., Matwijczuk, A., &amp; Gondek, E. (2021). Spray drying of pure kiwiberry pulp in dehumidified air. <i>Drying Technology</i>, 1-15.</li> <li>7. Rybak, K., <b>Samborska, K.</b>, Jedlińska, A., Parniak, O., Nowacka, M., Witrowa-Rajchert, D., &amp; Wiktor, A. (2020). The impact of pulsed electric field pretreatment of bell pepper on the selected properties of spray dried juice. <i>Innovative Food Science &amp; Emerging Technologies</i>, 65, 102446.</li> <li>8. <b>Samborska K</b>, Suszek J, Hać-Szymańczuk E, Matwijczuk A, Gładyszewska B, Chocyk D, Gładyszewski G, Gondek E. 2018. Characterization of membrane processed honey and the effect of ultrafiltration with diafiltration on subsequent spray drying. <i>Journal of Food Process Engineering</i>, 41(6), e12818, 10.1111/jfpe.12818</li> <li>9. <b>Samborska K</b>, Barańska A, Szulc K, Jankowska E, Truszkowska M, Ostrowska-Ligeża E, Wołosiak R, Szymańska E, Jedlińska A. 2020. Reformulation of spray dried apple concentrate and honey for the enhancement of drying process performance and the</li> </ol>

	<p>physicochemical properties of powders. Journal of the Science of Food and Agriculture, 100(5), 2224-2235</p> <p>PATENT</p> <p>10. <b>Samborska K.</b> Jedlińska A, Wiktor A, Witrowa-Rajchert D. 2021. Sposób otrzymywania proszku miodowego (Method to obtain honey powder). P.427692.</p>
<p>Experience in work with doctoral students (defended doctoral dissertations, doctoral programmes opened) in chronological order</p>	<p>Completed doctorates - assistant supervisor (2016)</p> <p>Since October 2019 - supervisor at the Doctoral School of the Warsaw University of Life Sciences</p>
<p>Project/grants achievements (from the last 10 years)</p>	<ol style="list-style-type: none"> <li>1. Starting platforms for new ideas: "Innovative honey powders for the food and feed industry", Start Platform - Eastern Business Accelerator", with the participation of Puławy Science and Technology Park, European Regional Development Fund, priority axis I, Entrepreneurial Eastern Poland, actions 1.1 , Sub-measure 1.1.1. (03-09.2020)</li> <li>2. Innovation Incubator+: "Development of technology for the production of innovative pro-health juices" (01/04/2018-30/09/2018) implemented as part of the project entitled "Support for the management of scientific research and commercialization of R&amp;D results in research units and enterprises", Intelligent Development Operational Program 2014-2020 (4.4), function: principal investigator</li> <li>3. Grant of the National Science Center N312 267 140: "Spray drying of honey and enzyme preparations - an attempt to reduce the addition of the carrier and degradation of biologically active substances" (May 10, 2012 - November 9, 2015), function: principal investigator</li> <li>4. Grant of the National Science Center N312 077238: "Preparation, characterization and testing of the influence of selected biopolymers on the course of the recrystallization process in model systems and food ice cream" (2010-2014), function: contractor</li> </ol>
<p>Topic – research problem – for which the candidate supervisor seeks a doctoral student</p>	<p>Microencapsulation of natural extracts (obtained using non-thermal methods, including pulsed electric field, membrane separation) by spray drying (including low-temperature dehumidified air-assisted spray drying, with the addition of new types of carriers) in order to obtain natural powdered colorants with improved properties.</p>
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