

Dr DRAGANA RANČIĆ, full professor

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Research field/area

Prof. Dragana Rančić is the author of over 170 scientific publications, including: chapters in seven international and national monographs, more than 30 articles in peer-reviewed scientific journals, and over 130 scientific conference reports. Her work has been cited 583 times (Scopus), with a Hirsch index of 12 (Scopus). She has actively contributed to over 20 national and international research projects, including five ongoing studies in the past five years. Her research focuses on the detailed analysis of the micromorphological, anatomical, and ultrastructural features of vegetative and reproductive organs in selected plant species, particularly crops, medicinal, and aromatic plants, from the Balkan biodiversity region. She investigates the effects of biotic and abiotic stress factors, such as drought, on plant anatomy and morphology, with a strong emphasis on structural-physiological connections. She places special emphasis on the histochemical localization and characterization of secondary metabolites in plants and plant-based sources. To achieve this, she utilizes a diverse range of imaging techniques, including light, polarized, fluorescence, and electron microscopy, with a growing focus on Raman microscopy. Her recent work integrates traditional herbal knowledge and the characterization of various plants bioactive compounds to develop innovative products in agriculture and food sciences, particularly food supplements and functional foods.

International scientific collaborations

Prof. Dragana Rančić has built extensive international scientific collaborations, conducting experimental research in various laboratories worldwide. Through these collaborations, she has developed expertise in a range of microscopic techniques, including transmission electron microscopy at Jodrell Micromorphology Laboratory, Kew Royal Botanical Gardens, London, UK. Key research experiences include studying hydraulic conductivity at the Institute of Systematic Botany and Ecology, Ulm University, Germany, applying anatomical methods to investigate crop plants and plant based sources for food industry and perform QTL analysis at the Franciszek Gorski Institute, Polish Academy of Sciences, Department of Biotechnology, Krakow, Poland and training in Raman microscopy/spectroscopy for in situ analysis of bioactive plant compounds at the Raman Imaging Group, Jagiellonian University, Krakow, Poland as well as at the Julius Kühn Institute, Berlin, Germany.

She is an active member of several scientific societies, including the European Microscopy Society (EMS); Serbian Society for Microscopy (SSM); Serbian Plant Physiology Society; European Plant Science Organization (EPSO) and International Society for Plant Spectroscopy (ISPS).

Education

- Bachelor: 1991-1997, Biology, Faculty of Biology, University of Belgrade, Serbia. Thesis title: "Ecological features of halophytes- morphological and anatomical analysis of some halophytes of Montenegro coast: *Cakile maritima*, *Artochnemum fruticosum* and *Halimione portulacoides*".
- Master studies: 1998-2003, Plant ecology, Faculty of Biology, University of Belgrade, Serbia. Thesis title: "Morpho-anatomical alterations of vegetative and reproductive organs of plant species *Cirsium arvense* (L.) Scop. caused by eriophyid mite *Aceria anthocoptes* (Nal.)".
- Ph.D. studies: 2004-2011, Faculty of Agriculture University of Belgrade, Serbia, Thesis title: "Morpho-anatomical investigations of tomato exposed to drought".

Employment

- 2001-2004, Teaching Assistant, Faculty of Agriculture, University of Belgrade, Serbia
- 2004 –2012, Appointed Assistant (Assistant Lecturer), Faculty of Agriculture University of Belgrade, Serbia.
- 2012-2017, Assistant Professor, Faculty of Agriculture, University of Belgrade, Serbia.

- 2017-2021 Associate professor, Faculty of Agriculture, University of Belgrade, Serbia.
- 2021 till now, Full professor, Faculty of Agriculture, University of Belgrade, Serbia.

Awards, prizes, skills

- Awarded a scholarship by the Ministry of Science and Technological Development of the Republic of Serbia during PhD studies
- Honored with the “Dr. Radomir Konjević” award, recognizing outstanding young researchers in the field of Plant Physiology in Serbia during PhD studies
- Recipient of multiple CoB Traveling Fellowships to attend international scientific conferences
- Recognized for excellence in scientific communication with the best poster presentation award at 10th Multinational Congress on Microscopy and VIII International Scientific Agriculture Symposium

Selected projects from the past five years

- 2021–2024: Programme Ideas **R-SPECT** (Fund of Science of the Republic of Serbia & World Bank) – *Novel Raman Chemometrics-Based Approach in Food Quality Assessment: Carotenoids as Model Nutrients for Application to Functional Products*
- 2019–2025: HORIZON 2020- MSCA-RISE-2018 **EthnoHERBS** – *Conservation of European Biodiversity through Exploitation of Traditional Herbal Knowledge for the Development of Innovative Products* (Grant Agreement ID: 823973)
- 2019–2021: **Bilateral Project between Serbia and China** – *Biological Effects of Extracts and Molecules Isolated from Plants in the Territory of the Balkans*. Fund of Government of the Republic of Serbia and the Government of the People's Republic of China
- 2021-2023-**Bilateral Project between Serbia and Hungary**: Anatomical, phytochemical and bioactivity investigation of selected *Artemisia* taxa from Serbia and Hungary – fundamental and applied approach - 451-03-01345/2020-09/10. Fund of Government of the Republic of Serbia and the Government of the Republic of Hungary
- 2023-2025 **Bilateral Project between Serbia and Slovenia**: Identification of wood in cultural heritage objects from Serbia and Slovenia for the management and implementation of restoration and conservation measures

Selected publications from the past five years

1. Kolašinac, S., Pećinar, I., Cvetković, M., Godevac, D., Stanisavljević, N., Veljović, M., Šoštarić, I., Aćić, S., **Rančić, D.**, Mačukanović-Jocić, M., & et al. (2025). Carotenoids in paprika fruits and ajvar: Chemical characterization and biological activity. *Foods*, 14(6), 914. (M21)
2. Kandić, V., Savić, J., **Rančić, D.**, & Dodig, D. (2023). Contribution of agro-physiological and morpho-anatomical traits to grain yield of wheat genotypes under post-anthesis stress induced by defoliation. *Agriculture*, 13(3), 673. (M21)
3. Jovanović-Radovanov, K., & Rančić, D. (2023). Susceptibility of selected crops to simulated imazethapyr carryover: A morpho-anatomical analysis. *Agronomy*, 13(7), 1857. (M21)
4. Gavrilović, M., **Rančić, D.**, Oskolski, A., Matic, M., Kocev, M., Jelikić, A., & Janackovic, P. (2024). The coffin-reliquary of the holy Serbian king Stefan of Dečani (fourteenth century): Wood, pigments and metal surfaces. *Journal of Wood Science*, 70, 37. (M21)
5. Hladnik, M., Unković, N., Janakiev, T., Grbić, M. L., Arbeiter, A. B., Stanković, S., Janačković, P., Gavrilović, M., **Rančić, D.**, Bandelj, D., & Dimkić, I. (2022). An insight into an olive scab on the “Istrska Belica” variety: Host-pathogen interactions and phyllosphere mycobiome. *Microbial Ecology*. (M21)
6. Warchol, M., Sikora, K. J., **Rančić, D.**, Pecinar, I., Warzecha, T., Idziak Helmcke, D., Laskos, K., Czyczyło Mysza, I., Dziurka, K., & Skrzypek, E. (2024). Comparative characteristics of oat doubled haploids and oat × maize addition lines: Anatomical features of the leaves, chlorophyll a fluorescence, and yield parameters. *PLOS ONE*, 19(4), e0298072. (M22)

7. Mačukanović-Jocić, M., Stešević, D., **Rančić, D.**, & Šundić, M. (2023). Pollen morphology and flower visitors of *Leiotulus aureus* (Sm.) Pimenov & Ostr. (Apiaceae). *Acta Botanica Croatica*, 82(1), 44-51. (M23)
8. Gavrilović, M., **Rančić, D.**, Garcia-Jacas, N., Susanna, A., Dajić-Stevanović, Z., Marin, P. D., & Janačković, P. (2020). Anatomy of Balkan *Amphoricarpos* Vis. (Cardueae-Asteraceae) taxa. *Biologia*, 75, 209–222. (M23)
9. Pećinar, I., Quarrie, S. P., Bertin, N., **Rančić, D.**, Savić, S., Jovanović, Z., & Stikić, R. (2021). Tomato fruit development in response to different irrigation practices: Developmental study of pericarp cell layers. *Biology and Life Sciences Forum*, 4, 105.
10. Janačković, P., Gavrilović, M., **Rančić, D.**, Stešević, D., Dajić-Stevanović, Z., & Marin, P. (2021). Anatomical traits of *Artemisia umbelliformis* subsp. *eriantha* (Asteraceae) alpine glacial relict from Mt. Durmitor (Montenegro). *Botanica Serbica*, 45(1), 23-30. (M23)

Links:

- https://kobson.nb.rs/nauka_u_srbiji.132.html?autor=Rancic%20Dragana%20V&samoar=#.XSXA87hArk
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- <https://www.scopus.com/authid/detail.uri?authorId=13613944700>
- <https://orcid.org/0000-0001-5955-8445?lang=en>
- https://www.researchgate.net/profile/Dragana_Rancic2?ev=hdr_xprf&_sg=WE7Al1HNCtvYtbfg7gZHlqCdiZzsUk83KXIOAx_Xg73-2wEYnRVWfFw3UnphXnwYzR8VeFx7Z7zfdFSUMN6ILYug