

Rafal Baranski, prof.



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Consultation hours:

Research interest:

- Plant biotechnology, genetic modification of plants and genome editing, plant cell and tissue culture in vitro, molecular techniques
- Plant breeding and genetic resources

Research experience:

Visiting Scholar (Univ. of Birmingham, UK, 1994; Horticulture Research International, UK, 2000-2001, Julius Kuehn Institute, Germany 2003-2006)

DSc, (Habilitation) (2009, Genetic modification of carrot (*Daucus carota* L.) by using transgenesis)

PhD (1996, Effectiveness of gynogenesis in red beet)

Professional profiles:

ORCID: <https://orcid.org/0000-0001-9276-3870>

Research ID: <https://publons.com/researcher/1361853/rafal-baranski/>

Mendeley: <https://www.mendeley.com/profiles/rafal-baranski/>

Research Gate: https://www.researchgate.net/profile/Rafal_Baranski/research

Academia:

Google Scholar: <https://scholar.google.com/citations?user=X4I8fuUAAAAJ&hl=pl&oi=ao>

LinkedIn:

List of selected publications:

Smoleń S., Lukaszewicz A., Klimek-Chodacka M., Baranski R. 2020. Effect of soil salinity and foliar application of jasmonic acid on mineral balance of carrot plants tolerant and sensitive to salt stress. *Agronomy* 10, 659; doi:10.3390/agronomy10050659

Baranski R., Lukaszewicz A. 2019. Genetic engineering of carrot. In: Simon P.W., Iorizzo M., Grzebelus D., Baranski R. (eds.) *Compendium of Plant Genomes: The Carrot Genome*. Springer-Nature, pp. 149-186

- Klimek-Chodacka M., Oleszkiewicz T., Baranski R. 2019. Visual assay for gene editing using a CRISPR/Cas9 system in carrot callus in vitro. In: Qi Y. (ed.) *Methods in Molecular Biology, Plant Genome Editing with CRISPR Systems*. Humana Press, 1917 pp. 203-215
- Dudek M., Machalska E., Oleszkiewicz T., Grzebelus E., Baranski R., Szcześniak P., Mlynarski J., Zajac G., Kaczor A., Baranska M. 2019. Chiral amplification in nature: cell-extracted chiral carotenoid crystals studied via RROA of model systems. *Angew. Chem. Int. Ed.* 58: 8383-8388
- Baranski R., Klimek-Chodacka M., Lukaszewicz A. 2019. Approved genetically modified (GM) horticultural plants: A 25 year perspective. *Folia Hort.* 31: 3-49
- Smoleń S., Baranski R., Ledwożyw-Smoleń I., Skoczylas Ł., Sady W. 2019. Combined biofortification of carrot with iodine and selenium. *Food Chem.* 300: 125202
- Oleszkiewicz T., Klimek-Chodacka M., Milewska-Hendel A., Zubko M., Stroz D., Kurczynska E., Boba A., Szopa J., Baranski R. 2018. Unique chromoplast organization and carotenoid gene expression in a model carotenoid-rich carrot callus. *Planta* 248: 1455-1471
- Rygula A., Oleszkiewicz T., Grzebelus E., Pacia M. Z., Baranska M., Baranski R. 2018. Raman, AFM and SNOM high resolution imaging of carotene crystals in a model carrot cell system. *Spectrochim. Acta A: Mol. Biomol. Spectr.* 197: 47-55
- Klimek-Chodacka M., Oleszkiewicz T., Lowder L.G., Qi Y., Baranski R. 2018. Efficient CRISPR/Cas9-based genome editing in carrot cells. *Plant Cell Rep.* 37: 575-586
- Baranski, R., Goldman, I., Nothnagel, T., Scott, J.W. 2016. Improving color sources by plant breeding and cultivation. In: Carle, R., Schweiggert, R.M. (Eds.), *Handbook on Natural Pigments in Food and Beverages: Industrial Applications for Improving Food Color*. Woodhead Publishing, pp. 429-472