

Curriculum vitae

Marianna Rakszegi

Marianna Rakszegi started her scientific work in September 1998 at the Cereal Breeding Department of the Agricultural Research Institute of the Hungarian Academy of Sciences. Her task at the research institute was to introduce and apply traditional quality research and related chemical and molecular biological tests, which can make quality selection more effective during wheat breeding. Her PhD thesis was defended at the Budapest University of Technology and Economics (BMGE), Faculty of Chemical Engineering in 2005. In 2022, she defended her doctoral dissertation entitled 'Investigation of natural bioactive components and their enrichment in cereals'. She is an academic advisor from 2023. Since obtaining her PhD, she has been managing the work of the quality laboratory.

She plays a key role in the submission, organization and research implementation of numerous domestic and international projects. Among these, the results of the Pannonian wheat projects contributed to the birth of the new Hungarian 'Wheat' standard (MSZ 6383:2012). She started her research on bioactive components in the framework of the EU-FP6-Healthgrain project (2005-2010), then, following the path of healthy nutrition and environmental protection, she joined the EU-FP7-Solibam project as a working group leader (2010-2014). She won three OTKA projects as a supervisor. She is the working group leader of the COST-Sourdomics and Acryred projects (2019-2023, 2022-2026).

She carries out educational activities like laboratory practice, summer practice and diploma thesis in cooperation with BMGE, SZIE/MATE and Pannon Universities and in the framework of the COST projects. She has one graduated PhD student. She played the role of opponent, secretary or committee member during the defense of several PhD theses. In addition, in the framework of the subject 'Transgenic organisms', she lectured for four years on three topics ('Transformation methods', 'Detection and analysis of transgenic plants' and 'Modification of compositional traits by molecular breeding').

The total number of her scientific publications is more than 140, to which she has more than 3,200 citations. The number of her impact factors exceeds 160. As a co-breeder, she participated in the development of 43 wheat and 2 spelt wheat varieties. Thanks to her scientific professional experience, she is invited by many domestic and international journals and organizations to prepare expert opinions, to evaluate scientific articles and projects. She is member of the editorial board of the Journal of Cereal Science. She also participates in the popularization of the results, for example during the Researchers' Night, Farmer's Days or as public articles.

Memberships:

Hungarian Academy of Sciences, Plant Breeding Scientific Committee (2015-)
Wheat Initiative 'Improving Wheat Quality for Processing and Health' working group (2019-)
Eucarpia (European Association for Research on Plant Breeding), (2007-)
National Research, Development and Innovation Office, Crop production and Animal Breeding Expert Board (2021-, OTKA jury member)

Positions:

Chairman of the Biotechnology Working Committee of the Hungarian Academy of Sciences, Veszprém area (VEAB) (2019-)

Scientific Awards:

Academic-Patent Award, 2020

'Researcher of the Year' title, Veszprém Territorial Committee of the Hungarian Academy of Sciences, 2017

Zoltán Magyary postdoctoral fellowship, National Excellence Program (2013-2014)

János Bolyai Scholarship of the Hungarian Academy of Sciences (2005-2008, 2017-2019)

Hungarian State Eötvös scholarship (2000, 2005)

OECD Fellowship (2006)

Graduated PhD students:

Karolina Tremmel-Bede, 2021, BMGE György Oláh Doctoral School

TDK students:

Krisztina Molnár, 2007, XXVIII. OTDK, Pannon University, Georgikon Faculty, Keszthely, 1st place

Editorial Board Membership:

Journal of Cereal Science, 2019- (Editorial Board Member)

Guest Editor in special issues:

Frontiers in Plant Science:

Aegilops: Promising Genesources to Improve Agronomical and Quality Traits of Wheat I.

Aegilops: Promising Genesources to Improve Agronomical and Quality Traits of Wheat II.

Frontiers in Nutrition:

Nutrition and Sustainable Development Goal 9: Industry, Innovation, and Infrastructure

Books:

Rakszegi M., Papageorgiou M., M. Rocha J. Developing Sustainable and Health-Promoting Cereals and Pseudocereals. London, United Kingdom / England : Academic Press (2023)

ISBN: 9780323905664

Projects with leadership:

1. Reducing acrylamide exposure of consumers by a cereals supply-chain approach targeting asparagine, WG2 leader, H2020 COST Action ACRYRED, CA21149, 2022-2026

2. Exploring of the genetic, compositional and processing potentials of spelt, NKFIH OTKA, K 135211, 2020-2024

3. Sourdough biotechnology network towards novel, healthier and sustainable food and bioprocesses, WG1 leader, H2020 COST Action SOURDOMICS, CA18101, 2019-2023

4. New aspects in wheat breeding: Improving the bioactive component composition and its effects, supervisor, NKFIH OTKA, CK 112169, 2015-2018

5. Characterization of crop quality and bioactive component composition of cereals, buckwheat and bean breeding lines, NKFIH 2018-2.1.11-TÉT-SI-2018-00010, Hungarian-Slovenian bilateral, 2019-2021

6. Breeding of healthy cereals and examination of their practical usability, NKFIH, TÉT_12_JP-1-2014-0004, Hungarian-Japanese bilateral, 2015-2017

7. Strategies for Organic and Low-input Integrated Breeding and Management (SOLIBAM), WP leader, EU FP7 Collaborative Project (FP7 KBBE- 245058), 2010-2015

8. Examination of the properties and importance of starch in wheat breeding, supervisor, OTKA FK 68099, 2007-2009

Participation in projects:

1. Multifunctional plants as alternatives in the service of sustainable agriculture, GINOP-2.3.3-15-2016-00029, 2017-2021

2. Identification of genomic regions influencing leaf rust resistance and quality parameters in a wild goat wheat species (*Aegilops biuncialis*) and their use in wheat breeding, NKFIH OTKA K 116277, 2015-2020
3. Utilization of old Carpathian basin landraces in wheat breeding, NKFIH OTKA K 123781, 2017-2021
4. Characterization and use of the quality of old wheat genotypes in market-oriented breeding AGR_PiAC_13-1-2013-0074, 2013-2016
5. Correlation of the baking quality of wheat with the sugar and pentosan composition, OTKA 80292CK, 2009-2013
6. Health preservation and tradition: raw material, product and technology development in the cereal supply chain, (HTcereal), OM355/2008, 2009-2012
7. Breeding, cultivation and food industrial processing system of Pannon wheat varieties and candidate varieties, (Pannon 2), National Technology Program, Tech-09-A3-2009-0221, 2009-2013
8. Exploiting bioactivity of European cereal grains for improved nutrition and health benefits (HEALTHGRAIN), EU-FP6 Integrated Project, (EU-FP6-514008), 2005-2010
9. The Pannon quality wheat development program, (Pannon 1), OMFB-01280/2004, 2005-2017
10. Use of a gene responsible for Bánkúti 1201 protein overproduction in modern varieties for molecular and biochemical marker selection, FVM46028/2004, 2004-2006

Patents:

Wheat varieties:

Mv Regiment, Mv Hombár, Mv-Kolo, Mv Kemence, Mv Táltos, Mv Gorsium, Mv Vekni, Mv Lucilla, Mv Zelma, Mv Laura, Mv Bodri, Mv Toldi, Mv Menüett, Mv Karizma, Mv Petrence, Mv Kolompos, Mv Melodia, Mv Apród, Mv Kikelet, Mv Tallér, Mv Sobri, Mv Lepény, Mv Karéj, Mv Kokárda, Mv Nádor, Mv Pántlika, Mv Pengő, Mv Krajcár, Mv Nemere, Mv Ménrót, Mv Bojtár, Mv Kepe, Mv Ispán, Mv Ikva, Mv Mente, Mv Dandár, Mv Kondás, Mv Karikás, Mv Uncia, Mv Dallam, Mv Felleg, Mv Káplár, Mv Pirkadat

Spelt varieties:

Mv Goldkorn/ Mv-Martongold, Mv Vitalgold

Identifiers:

MTMT azonosító: 10002524

ResearcherID: B-2904-2013

ScopusID: 8396479400

ORCID: 0000-0003-0798-8974

ResearchGate

https://www.researchgate.net/profile/Marianna_Rakszegi