

VIRGILIJA GAVELIENĖ

CONTACT INFORMATION

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EDUCATION AND ACADEMIC DEGREE

1987 Candidate of biological sciences. Defense of doctoral thesis “Regulation of barley and wheat stems growth by new derivatives of dimethylmorpholinium chloride (DMC” in Institute of Botany In 1993 nostrificated as doctor of nature sciences, biology (plant physiology).

1970 -1975 Vilnius State Pedagogical Institute Faculty of Nature and Geography Sciences – biology, teacher of biology qualification.

PROFESSIONAL EXPERIENCE

2022. 11 **Senior Researcher**
Nature Research Centre, Institute of Botany, Laboratory of Plant Physiology

2020 -- 2022 **Researcher**
Nature Research Centre, Institute of Botany, Laboratory of Plant Physiology

2018 -- 2020 **Junior Researcher**
Nature Research Centre, Institute of Botany, Laboratory of Plant Physiology

1994 -- 2018 **Senior Researcher**
from 1994 to 2010 Institute of Botany, Laboratory of Plant Physiology, from 2010-2018 Nature Research Centre, Institute of Botany, Laboratory of Plant Physiology

RESEARCH INTERESTS

Field of research: regulation of plant growth, embryogenesis, morphogenesis, studies of the effect of abiotic factors (temperature) on the growth and functioning of agricultural plants and the formation of productivity. Application of biochemical and molecular methods in studying the effects of negative environmental factors on plant growth and development. The search for environmentally friendly biostimulants, improving the resistance of agricultural plants to abiotic factors.

PUBLICATIONS

Scientific articles published in journals (books), indexed in „Clarivate Analytics Web of Science“ database (with citation index):

1. Gavelienė, V., & Jurkonienė, S. (2022). Probiotics Enhance Cereal Yield and Quality and Modify Agrochemical Soil Properties. *Microorganisms*, 10(7), 1277. [Science Citation Index Expanded (Web of Science); Scopus] [IF:4,128; AIF: 3,736; IF/AIF: 1,053; Q2 (2020), InCites JCR

- SCIE)] [CiteScore: 2,20; SNIP: 1,467; SJR: 0,892; Q2(2020, Scopus Sources)] [M.kr.: N 013] [Indėlis: 0,125]
- 2. Gavelienė, V.,** Jurkonienė, S., Jankovska-Bortkevič, E., & Švegždienė, D. (2022). Effects of Elevated Temperature on Root System Development of Two Lupine Species. *Plants*, 11(2), 192. [Science Citation IndexExpanded (Web of Science); Scopus] [IF: 3,935; AIF: 3,736; IF/AIF: 1,053; Q1 (2020, InCites JCR SCIE)] [CiteScore: 2,20; SNIP: 1,467; SJR: 0,892; Q2 (2020, Scopus Sources)] [M.kr.: N 013] [Indėlis: .
- 3. Gavelienė, V.;** Šocik, B.; Jankovska-Bortkevič, E.; Jurkonienė, S. (2021). Plant Microbial Biostimulants as a Promising Tool to Enhance the Productivity and Quality of Carrot Root Crops. *Microorganisms*, 9, 1850. doi:10.3390/microorganisms9091850 [Science Citation Index Expanded (Web of Science); Scopus] [IF: 4,128; AIF:3,736; IF/AIF: 1,053; Q2 (2020, InCites JCR SCIE)] [CiteScore: 2,20; SNIP: 1,467; SJR: 0,892; Q2 (2020,Scopus Sources)] [M.kr.: N 013] [Indėlis: 0,125]
- 4. Žalnierius, T.,** Šveikauskas, V., Aphalo, P. J., **Gavelienė, V.,** Būda, V., & Jurkonienė, S. (2022). Gibberellic Acid (GA3) Applied to Flowering *Heracleum sosnowskyi* Decreases Seed Viability Even If Seed Development Is Not Inhibited. *Plants*, 11(3), 314. [Science Citation Index Expanded (Web of Science); Scopus] [IF: 3,935;AIF: 3,736; IF/AIF: 1,053; Q1 (2020, InCites JCR SCIE)] [CiteScore: 2,20; SNIP: 1,467; SJR: 0,892; Q2 (2020,Scopus Sources)] [M.kr.: N 013] [Indėlis: 0,125]
- 5. Mockevičiūtė, R.,** Jurkonienė, S., **Gavelienė, V.,** Jankovska-Bortkevič, E., Šocik, B., Armalytė, G., & Budrys, R.(2022). Effects Induced by the Agricultural Application of Probiotics on Antioxidant Potential of Strawberries.*Plants*, 11(6), 831. [Science Citation Index Expanded (Web of Science); Scopus] [IF: 3,935; AIF: 3,736; IF/AIF: 1,053; Q1 (2020, InCites JCR SCIE)] [CiteScore: 2,20; SNIP: 1,467; SJR: 0,892; Q2 (2020, Scopus Sources)] [M.kr.: N 013] [Indėlis: 0,125]
- 6. Jurkonienė, S.,** Jankauskienė, J., Mockevičiūtė, R., **Gavelienė, V.,** Jankovska-Bortkevič, E., Sergiev, I.,Todorova, D., & Anisimovienė, N. (2021). Elevated temperature induced adaptive responses of two Lupinespecies at early seedling phase. *Plants*, 10(6), 1-13. doi:10.3390/plants10061091 [Science Citation IndexExpanded (Web of Science); Scopus] [IF: 3,935; AIF: 3,736; IF/AIF: 1,053; Q1 (2020, InCites JCR SCIE)] [CiteScore: 2,20; SNIP: 1,467; SJR: 0,892; Q2 (2020, Scopus Sources)] [M.kr.: N 013] [Indėlis: 0,125]
- 7. Sergiev, I.,** Todorova, D., Shopova, E., Brankova, L., Jankauskienė, J., Jurkonienė, S., **Gavelienė, V.,** &Mockevičiūtė, R. (2020). Assessment of synthetic auxin type compounds as potential modulators of herbicideaction in *Pisum sativum* L. *Biologia*, 75(11), 1845-1853. doi:10.2478/s11756-020-00557-0 [Science Citation Index Expanded (Web of Science); Scopus; SpringerLink] [IF: 1,350; AIF: 4,261; IF/AIF: 0,316; Q4 (2020,InCites JCR SCIE)] [CiteScore: 1,60; SNIP: 0,556; SJR: 0,282; Q3 (2020, Scopus Sources)] [M.kr.: N 013][Indėlis: 0,125]
- 8. Jankovska-Bortkevič, E.,** **Gavelienė, V.,** Šveikauskas, V., Mockevičiūtė, R., Jankauskienė, J., Todorova, D., Sergiev, I., & Jurkonienė, S. (2020). Foliar application of polyamines modulates winter oilseed rape responses to increasing cold. *Plants*, 9(2), 117-126. doi:10.3390/plants9020179 [Science Citation Index Expanded (Web of Science); Scopus; BIOSIS Previews] [IF: 3,935; AIF: 3,736; IF/AIF: 1,053; Q1 (2020, InCites JCR SCIE)] [CiteScore: 2,20; SNIP: 1,467; SJR: 0,892; Q2 (2020, Scopus Sources)] [M.kr.: N 013] [Indėlis: 0,125]
- 9. Jankovska-Bortkevič, E.,** **Gavelienė, V.,** Koryznienė, D., Jankauskienė, J., Mockevičiūtė, R., & Jurkonienė, S.(2019). Response of winter oilseed rape to imitated temperature fluctuations in autumn-winter period.*Environmental and experimental botany*, 166, 1-9. doi:10.1016/j.envexpbot); Scopus; Zoological Record] [IF: 2,379; AIF: 5,327; IF/AIF: 0,446; Q2 (2019, InCites JCR SCIE)] [CiteScore: 3,50; SNIP: 0,998;SJR: 0,995; Q1 (2019, Scopus Sources)] [M.kr.: N 013, N 012] [Indėlis: 0,142]

- 11. Gavelienė, V.,** Pakalniškytė, L., Novickienė, L., & Balčiauskas, L. (2018). Effect of biostimulants on cold resistance and productivity formation in winter rapeseed and winter wheat. *Irish journal of agricultural and food research*, 57(1), 71-83. doi:10.1515/IJAFR-2018-0008 [Science Citation Index Expanded (Web of Science); Scopus] [IF: 0,645; AIF: 2,371; IF/AIF: 0,272; Q3 (2018, InCites JCR SCIE)] [CiteScore: 0,82; SNIP: 0,443; SJR: 0,258; Q3 (2018, Scopus Sources)] [M.kr.: N 013] [Indėlis: 0,250]
- 12. Gavelienė, V.,** Pakalniškytė, L., & Novickienė, L. (2014). Regulation of proline and ethylene levels in rape seedlings for freezing tolerance. *Central European journal of biology*, 9(11), 1099-1107. doi:10.2478/s11535-014-0340-z [Science Citation Index Expanded (Web of Science); Scopus; SpringerLink] [IF: 0,710; AIF: 2,572;

Research articles in ISI MasterList and other peer-reviewed publications:

1. Jurkonienė, S., Mockevičiūtė, R., Jankauskienė, J., Jankovska-Bortkevič, E., Armalytė, **G., Gavelienė, V.** 2021. Application of Commercial Plant Probiotics Improves the Berry Yield and Quality of Field-Grown Blackcurrant. *ACS Agricultural Science & Technology*, 1(6): 615-622. DOI:10.1021/acsagscitech.1c00115.
2. Todorova D., Sergiev I., Shopova E., Brankova L., Jankauskienė J., Jurkonienė S., **Gavelienė V.,** Mockevičiūtė R. 2021. Physiological responses of pea plants to treatment with synthetic auxins and auxin-type herbicide. *Botanica*, 27(2): 125–133.

Other reviewed scientific publications (books, books' chapters, collections of articles, articles, textbooks and etc.):

Jankovska-Bortkevič, E., **Gavelienė, V.,** Jurkonienė, S., 2022. Physiological roles and signaling of polyamines in plants under stressed conditions. In: *Emerging Plant Growth Regulators In Agriculture. Roles in Stress Tolerance* (Eds Naeem, M., Aftab, T.). Elsevier Academic Press: London, UK: 303–316. DOI: 10.1016/B978-0-323-91005-7.00004-72.

PARTICIPATION IN INTERNATIONAL AND NATIONAL SCIENTIFIC PROGRAMMES AND PROJECTS

1. Lithuanian Science Council funded Lithuania-Ukraine program project “Investigation of the impact of proline and γ -aminobutyric acid on plant tolerance to water deficit”, 2022-2023.
2. Agreement of scientific collaboration between Nature Research Centre (Vilnius, Lithuania) and Institute of Plant Physiology and Genetics (Sofia, Bulgaria). Joint research project “Assessment of ability of synthetic auxin type compounds to counteract herbicide stress in crop plants”, 2019–2021.
3. Project under European Innovation Program “Soil structure and quality improvement (reconstruction) using microorganisms. Mitigation of nitrogen compounds emission to maintain plant productivity by using new generation microelements”, 2016–2019.
4. Project under Lithuanian and Bulgarian academies of sciences „Plant growth regulators – tools for increasing plants tolerance to temperature stress“, 2016–2018.

PARTICIPATION IN SCIENTIFIC CONFERENCES

International scientific conferences:

1. Jankovska-Bortkevič E., Jurkonienė S., **Gavelienė V.**, Mockevičiūtė R., Jankauskienė J., Todorova D., Sergiev I., Viluckas V., Prakas P. 2021. Effect of exogenous putrescine on winter oilseed rape response to low temperature. *XII International Agriculture Symposium "AGROSYM 2021"*, October 7-10, 2021, Jahorina, Bosnia and Herzegovina. Book of abstracts, p. 433.
2. Šocik B., Jurkonienė S., **Gavelienė V.**, Jankovska-Bortkevič E. Effect of probiotic compositions on growth, antioxidant activity and productivity of beetroot. *XII International Agriculture Symposium "AGROSYM 2021"*, October 7-10, 2021, Jahorina, Bosnia and Herzegovina. Book of abstracts, p. 434.
3. Jurkonienė S., **Gavelienė V.**, Mockevičiūtė R., Jankauskienė J., Jankovska-Bortkevič E., Šveikauskas V. 2021. Effects of probiotics on antioxidant potential of blackcurrant berries. *XII International Agriculture Symposium "AGROSYM 2021"*, October 7-10, 2021, Jahorina, Bosnia and Herzegovina. Book of abstracts, p. 435.
4. Jankovska-Bortkevič E., Jurkonienė S., **Gavelienė V.**, Sergiev I., Jankauskienė J., Koryznienė D., Šimulevič T. Cold acclimation impact on oilseed rape plasma membrane H⁺-ATPase activity during increasing cold stress treatment, International Scientific Conference Kliment's Days 2018, Sofia, November 8–9, 2018.
5. Jankauskienė J., Jurkonienė S., **Gavelienė V.**, Mockevičiūtė R., Jankovska-Bortkevič E., Todorova D., Sergiev I. The role of polyamines on IAA metabolism in legume plants under the field conditions, International Scientific Conference Kliment's Days 2018, Sofia, November 8–9, 2018.
6. Koryznienė D., Jurkonienė S., Žalnierius T., **Gavelienė V.**, Jankauskienė J., Jankovska-Bortkevič E., Bareikienė N. The effect of GA3 treatment on the development of *Heracleum sosnovskyi* Manden. seeds, International Scientific Conference Kliment's Days 2018, Sofia, November 8–9, 2018.
7. Jankovska-Bortkevič E., Koryznienė D., Jurkonienė S., **Gavelienė V.**, Jankauskienė J., Mockevičiūtė R. The response of winter oilseed rape to putrescine and low temperature treatment, The 11th International "Plant Functioning Under Environmental Stress", Cracow, September 12–15.

National scientific conferences:

1. Jankovska-Bortkevič E., Jurkonienė S., **Gavelienė V.**, Mockevičiūtė R., Šveikauskas V., Jankauskienė J., Todorova D., Prakas P. Effect of exogenous polyamines on winter wheat and oilseed rape cold stress response under field conditions, The 3rd International Conference on the Scientific Actualities and Innovations in Horticulture (SAIH2022), Vilnius, September 26-28, 2022.
2. Jankovska-Bortkevič E., Koryznienė D., Jankauskienė J., Mockevičiūtė R., **Gavelienė V.**, Todorova D., Jurkonienė S. Effects of polyamines on cold stress resistance of common bean, The 2nd International Conference on the Scientific Actualities and Innovations in Horticulture (SAIH2018), Kaunas, June 4–6, 2018.

PARTICIPATION IN THE STUDY

Scientific consultant:

Field of study: Biomedical sciences. Science direction: *Botany* (04 B)

Danguolė Kazlauskienė Doctoral thesis “The effect of auxin physiological analogues on oilseed rape (*Brassica napus* L.) development, organogenesis and embryogenesis “ Defended in 2007

Field of study: Natural sciences. Science direction: *Biology (N 010)*
E.Jankovska- Doctoral thesis: „Winter oilseed rape cold resistance characteristics Defended in 2020
Bortkevič and their alteration after treatment with polyamines and proline“

OTHERS

1. Ričkienė, A., **Gavelienė, V.** ir Jurkonienė, S. (2020). Augalų fiziologė Leonida Novickienė. Mokslo Lietuva, 15,
- 2..Jurkonienė S, **Gavelienė V.** Ar augalai pasiruošę sutikti šaltį?
<https://www.15min.lt/naujiena/laisvalaikis/ivairenybes/ar-augalai-pasiruose-sutikti-salti-941-1262284?>
- 3.Jurkonienė S, **Gavelienė V.**, Straipsnis tinklalapyje<https://balticprobiotics.lv/about-us/petijumi/article/probiohumus-ietekme-uz-ziemas-kviesu-sakotnejo-augsanas-gaitu>

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