

НАУЧНЫЕ ПУБЛИКАЦИИ СОТРУДНИКОВ ВИР В ЖУРНАЛАХ, ИНДЕКСИРУЕМЫХ В БАЗАХ ДАННЫХ  
«СЕТЬ НАУКИ» (WEB OF SCIENCE) И SCOPUS. 2022 г. (на 31.12.2022)

- Afanasenko O., Rozanova I., Gofman A., Lashina N., Novakazi F., Mironenko N., Baranova O., Zubkovich A. Validation of Molecular Markers of Barley Net Blotch Resistance Loci on Chromosome 3H for Marker-Assisted Selection. *Agriculture*. 2022;12(4):439. DOI: 10.3390/agriculture12040439
- Afanasenko O.S., Lashina N.M., Mironenko N.V., Kyrova E.I., Rogozina E.V., Zubko N.G., Khyutti A.V. Evaluation of Responses of Potato Cultivars to Potato Spindle Tuber Viroid and to Mixed Viroid/Viral Infection. *Agronomy*. 2022;12(12):2916. DOI: 10.3390/agronomy12122916
- Egorova A.A., Chalaya N.A., Fomin I.N., Barchuk A.I., Gerasimova S.V. De Novo Domestication Concept for Potato Germplasm Enhancement. *Agronomy*. 2022;12(2):462. DOI: 10.3390/agronomy12020462
- Fedorina J., Tikhonova N., Ukhatova Y., Ivanov R., Khlestkina E. Grapevine Gene Systems for Resistance to Gray Mold *Botrytis cinerea* and Powdery Mildew *Erysiphe necator*. *Agronomy*. 2022;12(2):499. DOI: 10.3390/agronomy12020499
- Gavrilenko T.A.; Pendinen G.I.; Yermishin A.P. GISH Analysis of the Introgression of the B Subgenome Genetic Material of Wild Allotetraploid Species *Solanum stoloniferum* into Backcrossing Progenies with Potato. *Agronomy*. 2022;12(4):787. DOI: 10.3390/agronomy12040787
- Glagoleva A., Kukoeva T., Mursalimov S., Khlestkina E., Shoeva O. Effects of Combining the Genes Controlling Anthocyanin and Melanin Synthesis in the Barley Grain on Pigment Accumulation and Plant Development. *Agronomy*. 2022;12(1):112. DOI: 10.3390/agronomy12010112
- Gordeeva E., Shoeva O., Mursalimov S., Adonina I., Khlestkina E. Fine Points of Marker-Assisted Pyramiding of Anthocyanin Biosynthesis Regulatory Genes for the Creation of Black-Grained Bread Wheat (*Triticum aestivum* L.) Lines. *Agronomy*. 2022;12(12):2934. DOI: 10.3390/agronomy12122934
- Khlestkin V., Erst T., Igoshin A., Khlestkina E., Rozanova I. Meta-Analysis of Genetic Factors for Potato Starch Phosphorylation. *Agronomy*. 2022;12(6):1343. DOI: 10.3390/agronomy12061343
- Sinjushin A., Semenova E., Vishnyakova M. Usage of Morphological Mutations for Improvement of a Garden Pea (*Pisum sativum*): The Experience of Breeding in Russia. *Agronomy*. 2022;12(3):544. DOI: agronomy12030544
- Sokolova D.V., Shvachko N.A., Mikhailova A.S., Popov V.S. Betalain Content and Morphological Characteristics of Table Beet Accessions: Their Interplay with Abiotic Factors. *Agronomy*. 2022;12(5):1033. DOI: 10.3390/agronomy12051033
- Tyryshkin L.G., Zeleneva Y.V., Brykova A.N., Kudryavtseva E.Y., Loseva V.A., Akhmedov M.A., Shikhmuradov A.Z., Zuev E.V. Long-Term Multilocal Monitoring of Leaf Rust Resistance in the Spring Bread Wheat Genetic Resources from Institute of Plant Genetic Resources (VIR). *Agronomy*. 2022;12(2):242. DOI: 10.3390/agronomy12020242
- Panova G.G., Semenov K.N., Shilova O.A., Bityutskii N.P., Artem'eva A.M., Khamova T.V. Korniyukhin D.L., Yakkonen K.L., Kanash E.V., Udalova O.R., Khomyakov Y.V., Anikina L.M., Zhuravleva A.S., Vertebniy V.E., Charykov N.A., Bankina T.A., Sharoyko V.V. New biologically active agents based on carbon and silicon nanostructures: The basis of creation and application in crop production. *AIP Conference Proceedings*. 2022;2390(1):030070. DOI: 10.1063/5.0069545
- Kolesnikov L.E., Popova E.V., Novikova I.I., Kolesnikova Y.R., Balagurova E.D. Application of Chitosan to Protect Wheat from Diseases and Boost Yields. *Applied Biochemistry and Microbiology*. 2022;58(3):329-335. DOI: 10.1134/S0003683822030073
- Sekridova A.V., Shilov I.A., Kislin E.N., Malyuchenko O.P., Kharchenko P.N. The Technology of Genetic Identification of Varieties and Wild-Growing Forms of Grapes Based on Multilocus Microsatellite Analysis. *Applied Biochemistry and Microbiology*. 2022;58(9):1050-1059. DOI: 10.1134/S0003683822090083
- Okhlopko Z.M., Razgonova M.P., Pikula K.S., Zakharenko A.M., Piekoszewski W., Manakov Y.A., Ercisli S., Golokhvast K.S. *Dracocephalum palmatum* S. and *Dracocephalum ruyschiana* L. Originating from Yakutia: A High-Resolution Mass Spectrometric Approach for the Comprehensive Characterization of Phenolic Compounds. *Applied Sciences*. 2022;12(3):1766. DOI: 10.3390/app12031766
- Razgonova M.P., Bazhenova B.A., Zabalueva Yu.Yu., Burkhanova A.G., Zakharenko A.M., Kupriyanov A.N., Sabitov A.S., Ercisli S., Golokhvast K.S. *Rosa davurica* Pall., *Rosa rugosa* Thumb., and *Rosa acicularis* Lindl. Originating from Far Eastern Russia: Screening of 146 Chemical Constituents in Three Species of the

Федеральный исследовательский центр Всероссийский институт генетических ресурсов растений имени Н.И. Вавилова  
N.I. Vavilov All-Russian Institute of Plant Genetic Resources

- Genus *Rosa*. *Applied Sciences*. 2022;12(19):9401. DOI: 10.3390/app12199401
- Khlestkina E., Shavrukov Y. Molecular-Genetic Basis of Plant Breeding. *Biomolecules*. 2022;12(10):1392. DOI: 10.3390/biom12101392
- Strygina K., Khlestkina E. Flavonoid Biosynthesis Genes in *Triticum aestivum* L.: Methylation Patterns in Cis-Regulatory Regions of the Duplicated *CHI* and *F3H* Genes. *Biomolecules*. 2022;12(5):689. DOI: 10.3390/biom12050689
- Appaev S.P., Kotseva A.R., Mataeva O.H., Yandieva A.R., Khatefov E.B. The effectiveness of growth processes' electrostimulation in corn hybrid seeds rodnik 180 sv. *BIO Web of Conferences*. 2022;53:02002. DOI: 10.1051/bioconf/20225302002
- Kolesova M.A., Lysenko N.S., Tyryshkin L.G. Resistance to diseases in samples of rare wheat species from the N.I. Vavilov All-Russian Institute of Plant Genetic Resources. *Cereal Research Communications*. 2022;50(2):287-296. DOI: 10.1007/s42976-021-00179-5
- Babak O.G., Anisimova N.A., Nikitinskaya T.V., Nekrashevich N.A., Yatsevich K.K., Drozd L.V., Fateev D.A., Berensen F.A., Artemyeva A.M., Kilchevsky A.V. Investigating of the polymorphism of Solanaceae R2R3 Myb and *Brassica Myb114* genes of transcription factors in connection with the anthocyanin biosynthesis regulation. *Doklady of the National Academy of Sciences of Belarus*. 2022;66,(4):414-424. DOI: 10.29235/1561-8323-2022-66-4-414-424
- Bemova V.D., Matveeva T.M. Prospects for the use of natural transgenic cultivated peanut (*Arachis hypogaea* L.) in breeding. *Ecological Genetics*. 2022;20(S):35. DOI: 10.17816/ecogen112340
- Fedorina J.V., Khlestkina E.K., Seferova I.V., Vishnyakova M.A. Genetic mechanisms underlying the expansion of soybean *Glycine max* (L.) Merr. cultivation to the north. *Ecological Genetics*. 2022;20(1):13-30. DOI: 10.17816/ecogen83879
- Khlestkina E.K. Modern investigations of plant genetic resources. Development of scientific schools and guidelines founded by N.I. Vavilov. *Ecological Genetics*. 2022;20(3):169-173. DOI: 10.17816/ecogen112018
- Khlestkina E.K., Khlestkin V.K. Interdisciplinary approaches in plant breeding and genetics: on the anniversary of Academician N.A. Kolchanov. *Ecological Genetics*. 2022;20(1):61-68. DOI: 10.17816/ecogen105794
- Khoreva V.I., Popov V.S., Kon'kova N.G. Application of the IR spectrometry method in the screening study of various oat species. *Ecological Genetics*. 2022;20(4):349-357. DOI: 10.17816/ecogen108503
- Krylova E.A., Khlestkina E.K., Burlyaeva M.O. Influence of air humidity on variability of morphological features of *Vigna unguiculata* (L.) Walp. in artificial conditions. *Ecological Genetics*. 2022;20(3):215-229. DOI: 10.17816/ecogen108877
- Lipatov P.Yu., Bogomaz F.D., Gosudarev K.D., Kondrashova S.A., Kuchevsky M.V., Malyuga N.L., Myagkiy E.V., Sergeenkova M.V., Tverdokhlebova V.R., Shtina A.D., Matveeva T.V., Khafizova G.V. New cellular T-DNAs in naturally transgenic plants. *Ecological Genetics*. 2022;20(S):40-41. DOI: 10.17816/ecogen112352
- Liu X., Ulyanov A.V., Khatefov E.B. The use of *R-nj*, *B1*, *P11* genes to improve marker properties in the selection of maize haploinducers. *Ecological Genetics*. 2022;20(3):193-202. DOI: 10.17816/ecogen108374
- Markova E.V., Chirinskaite A.V., Sopova Ju.V., Leonova E.I. he sweet protein brazzein as a promising natural sweetener. *Ecological Genetics*. 2022;20(S):48-49. DOI: 10.17816/ecogen112373
- Malysheva N.Y., Shelenga T.V., Solovyeva A.E., Malyshev L.L. Specific features of the biochemical composition of life forms of black medic (*Medicago lupulina* L.). *Ecological Genetics*. 2022;20(3):231-242. DOI: 10.17816/ecogen109231
- Porotnikov I.V., Puykkenen V.P., Antonova O.Y., Mitrofanova O.P. The efficiency of molecular markers of the *SKr* suppressor gene that determines the crossability of common wheat with rye. *Ecological Genetics*. 2022;20(3):203-214. DOI: 10.17816/ecogen110867
- Radchenko E.E., Abdullaev R.A., Akimova D.E., Zajtseva I.Y. Genetic diversity of barley accessions from Mongolia for greenbug resistance. *Ecological Genetics*. 2022;20(3):175-182. DOI: 10.17816/ecogen105875
- Zaikina E.A., Ismagilov K.R., Kuluev B.R. Search for SNP markers of stress tolerance in the *TaDREB1* and *TaWRKY19* genes of bread wheat in the Cis-Ural steppe zone. *Ecological Genetics*. 2022;20(3):183-192. DOI: 10.17816/ecogen106945

**Федеральный исследовательский центр Всероссийский институт генетических ресурсов растений имени Н.И. Вавилова**  
**N.I. Vavilov All-Russian Institute of Plant Genetic Resources**

- Zveinek I.A., Abdullaev R.A., Matvienko I.I., Radchenko E.E., Alpatieva N.V. Identification of the *eam8* allele associated with photoperiod insensitivity in barley accessions from Japan. *Ecological Genetics*. 2022;20(2):101-109. DOI: 10.17816/ecogen106033
- Virolainen P.A., Chekunova E.M. Optimization of CRISPR/Cas9 method for transgenesis of model microalgae *Chlamydomonas reinhardtii*. *Ecological Genetics*. 2022;20(S):42-43. DOI: 10.17816/ecogen112332
- Shabanova I.V., Neshchadim N.N., Boiko A.P. The Influence of Agrotechnology on Grain Quality and Yield of Winter Wheat of the Yuka Variety in the Conditions of the Western Ciscaucasia. *Environmental Footprints and Eco-Design of Products and Processes*. 2022;309-317. DOI: 10.1007/978-981-16-8731-0\_30
- Ozerski P.V. Contribution to the Bush-Cricket Fauna (Orthoptera, Tettigoniidae) of Novgorod and Tver Provinces. *Entomological Review*. 2022;102(5):658-663. DOI: 10.1134/S0013873822050086
- Gnutikov A.A., Nosov N.N., Loskutov I.G., Machs E.M., Blinova E.V., Probatova N.S., Langdon T., Rodionov A.V. New insights into the genomic structure of the oats (*Avena* L., Poaceae): intragenomic polymorphism of ITS1 sequences of rare endemic species *Avena bruhnsiana* Gruner and its relationship to other species with C-genomes. *Euphytica*. 2022;218(3). DOI: 10.1007/s10681-021-02956-z
- Glagoleva A.Y., Vikhorev A.V., Shmakov N.A., Morozov S.V., Chernyak E.I., Vasiliev G.V., Shatskaya N.V., Khlestkina E.K., Shoeva O.Y. Features of Activity of the Phenylpropanoid Biosynthesis Pathway in Melanin-Accumulating Barley Grains. *Frontiers in Plant Science*. 2022;13:923717. DOI: 10.3389/fpls.2022.923717
- Kroupin P.Y., Badaeva E.D., Sokolova V.M., Chikida N.N., Belousova M.Kh., Surzhikov S.A., Nikitina E.A., Kocheshkova A.A., Ulyanov D.S., Ermolaev A.S., Khuat T.M.L., Razumova O.V., Yurkina A.I., Karlov, G.I., Divashuk, M.G. *Aegilops crassa* Boiss. repeatome characterized using low-coverage NGS as a source of new FISH markers: Application in phylogenetic studies of the Triticeae. *Frontiers in Plant Science*. 2022;13:980764. DOI: 10.3389/fpls.2022.980764
- Porokhovinova E.A., Matveeva T.V., Khafizova G.V., Bemova V.D., Doubovskaya A.G., Kishlyan N.V., Podolnaya L.P., Gavrilova V.A. Fatty acid composition of oil crops: genetics and genetic engineering. *Genetic Resources and Crop Evolution*. 2022. DOI: 10.1007/s10722-022-01391-w
- Razgonova Mayya P., Okhlopko Zhanna M., Rozhina Zoya G., Egorova Polina S., Ercisli Sezai, Golokhvast Kirill S. Comparison of Wild and Introduced *Dracocephalum jacutense* P.: Significant Differences of Multicomponent Composition. *Horticulturae*. 2022;8(12):1211. DOI: 10.3390/horticulturae8121211
- Burmistrov V., Morisseau Ch., Babkov D.A., Golubeva T., Pitushkin D., Sokolova E.V., Vasipov V., Kuznetsov Ya., Bazhenov S.V., Novoyatlova U.S., Bondarev N.A., Manukhov I.V., Osipova V., Berberova N., Spasov A.A., Butov G.M., Hammock B.D. Anti-Inflammatory Activity of Soluble Epoxide Hydrolase Inhibitors Based on Selenoureas Bearing an Adamantane Moiety. *International Journal of Molecular Sciences*. 2022;23(18):10710. DOI: 10.3390/ijms231810710
- Samarina L.S., Malyarovskaya V.I., Rakhmangulov R.S., Koninskaya N.G., Matskiv A.O., Shkhalakhova R.M., Orlov Y.L., Tsaturyan G.A., Shurkina E.S., Gvasaliya M.V., Kuleshov A.S., Ryndin A.V. Population Analysis of *Diospyros lotus* in the Northwestern Caucasus Based on Leaf Morphology and Multilocus DNA Markers. *International Journal of Molecular Sciences*. 2022;23(4):2192. DOI: 10.3390/ijms23042192
- Besedin A.G., Putina O.V. Influence of climatic indicators on the dynamics of the growing season duration and forecasting vegetable peas' harvest date. *IOP Conference Series: Earth and Environmental Science*. 2022;949(118):012018. DOI: 10.1088/1755-1315/949/1/012018
- Kolesova M.A., Zakharov V.G., Tyryshkin L.G. Possible Effect of Abiotic Environmental Factors on Changes in Wheat Resistance to Leaf Rust. *Journal of Agricultural Science and Technology*. 2022;24(4):989-999.
- Runno-Paurson E., Agho C.A., Zoteyeva N., Koppel M., Hansen M., Hallikma T., Cooke D.E.L., Nassar H., Niinemets Ü. Highly Diverse *Phytophthora infestans* Populations Infecting Potato Crops in Pskov Region, North-West Russia. *Journal of Fungi*. 2022;8(5):472. DOI: 10.3390/jof8050472
- Magne T.M., de Oliveira Vieira T., Alencar L.M.R., Junior F.F.M., Gemini-Piperni S., Carneiro S.V., Fechine L.M.U.D., Freire R.M., Golokhvast K., Metrangolo P., Fechine P.B.A., Santos-Oliveira R. Graphene and its derivatives: understanding the main chemical and medicinal chemistry roles for biomedical applications. *Journal of Nanostructure in Chemistry*. 2022;12:693-727. DOI: 10.1007/s40097-021-00444-3
- Grigorev S.V., Illarionova K.V., Konarev A.V., Shelenga T.V. Differences in Metabolites of White and Naturally Colored Cotton: Implications for Biofunctional and

**Федеральный исследовательский центр Всероссийский институт генетических ресурсов растений имени Н.И. Вавилова**  
**N.I. Vavilov All-Russian Institute of Plant Genetic Resources**

- Aseptic Textiles. *Journal of Natural Fibers*. 2022;19(13):7060-7072. DOI: 10.1080/15440478.2021.1941490
- Pavlov A.V., Porokhovina E.A., Novikova L., Kutuzova S.N., Brutch N.B. New linseed accessions in the VIR collection, suitable for dual utilization (seed and fiber) in the North-Western Region of the Russian Federation. *Journal of Natural Fibers*. 2022;19(14):7553-7565. DOI: 10.1080/15440478.2021.1952137
- Razgonova M.P., Zakharenko A.M., Golokhvast K.S. Investigation of supercritical CO<sub>2</sub>-extracts of wild *Ledum palustre* L. (*Rhododendron tomentosum* Harmaja) and identification of its metabolites by tandem mass spectrometry. *Khimiya Rastitel'nogo Syr'ya*. 2022;(1):179-191. DOI: 10.14258/jcprm.2022019506
- Vishnyakova M., Sinjushin A., Čupina B., Rubiales D., Ellis N., Patto C.V., Medović A., Zorić L., Smýkal P. Aleksandar Mikić, the legume (re)searcher. *Legume Science*. 2022. DOI: 10.1002/leg3.134
- Vecherskii Maxim V., Khayrullin David R., Shadrin Andrey M., Lisov Alexander V., Zavarzina Anna G., Zavarzin Alexey A., Leontievsky Alexey A. Metagenomes of Lichens *Solorina crocea* and *Peltigera canina*. *Microbiology Resource Announcements*. 2022;11(1):e01000-21. DOI: 10.1128/MRA.01000-21
- Vladimirova Maria E., Muntyan Victoria S., Afonin Alexey M., Muntyan Alexey N., Baturina Olga A., Dzuibenko Elena A., Saksaganskaya Alla S., Simarov Boris V., Roumiantseva Marina L., Kabilov Marsel R. Complete Genome of *Sinorhizobium meliloti* AK76, a Symbiont of Wild Diploid *Medicago lupulina* from the Mugodgary Mountain Region. *Microbiology Resource Announcements*. 2022;11(3):01088-21. DOI: 10.1128/mra.01088-21
- Kuluev B.R., Mikhailova E.V., Kuluev A.R., Galimova A.A., Zaikina E.A., Khlestkina E.K. Genome Editing in Species of the Tribe Triticeae with the CRISPR/Cas System. *Molecular Biology*. 2022;56(6):885-901. DOI: 10.1134/S0026893322060127
- Razgonova M.P., Zinchenko Yu.N., Kozak D.K., Kuznetsova V.A., Zakharenko A.M., Ercisli S., Golokhvast K.S. Autofluorescence-Based Investigation of Spatial Distribution of Phenolic Compounds in Soybeans Using Confocal Laser Microscopy and a High-Resolution Mass Spectrometric Approach. *Molecules*. 2022;27(23):8228. DOI: 10.3390/molecules27238228
- Antonova E.V., Shimalina N.S., Korotkova A.M., Kolosovskaya E.V., Gerasimova S.V., Khlestkina E.K. Seedling Biometry of *nud* Knockout and *win1* Knockout Barley Lines under Ionizing Radiation. *Plants*. 2022;11(19):2474. DOI: 10.3390/plants11192474
- Azeem F., Ijaz U., Ali M.A., Hussain S., Zubair M., Manzoor H., Abid M., Zameer R., Kim D.S., Golokhvast K.S., Chung G., Sun S., Nawaz M.A. Genome-Wide Identification and Expression Profiling of Potassium Transport-Related Genes in *Vigna radiata* under Abiotic Stresses. *Plants*. 2022;11(1):2. DOI: 10.3390/plants11010002
- Belimov A.A., Shaposhnikov A.I., Azarova T.S., Syrova D.S., Kitaeva A.B., Ulyanich P.S., Yuzikhin, O.S., Sekste, E.A., Safronova V.I., Vishnyakova M.A., Tsyganov V.E., Tikhonovich I.A. Rhizobacteria Mitigate the Negative Effect of Aluminum on Pea Growth by Immobilizing the Toxicant and Modulating Root Exudation. *Plants*. 2022;11(18):2416. DOI: 10.3390/plants11182416
- Gnutikov A.A., Nosov N.N., Koroleva T.M., Punina E.O., Probatova N.S., Shneyer V.S., Rodionov A.V. Origin of the Rare Hybrid Genus *×Trisetokoeleria* Tzvelev (*Poaceae*) According to Molecular Phylogenetic Data. *Plants*. 2022;11(24):3533. DOI: 10.3390/plants11243533
- Gnutikov A.A., Nosov N.N., Loskutov I.G., Blinova E.V., Shneyer V.S., Probatova N.S., Rodionov A.V. New Insights into the Genomic Structure of *Avena* L.: Comparison of the Divergence of A-Genome and One C-Genome Oat Species. *Plants*. 2022;11(9):1103. DOI: 10.3390/plants11091103
- Kibkalo I. Effectiveness of and Perspectives for the Sedimentation Analysis Method in Grain Quality Evaluation in Various Cereal Crops for Breeding Purposes. *Plants*. 2022;11(13):1640. DOI: 10.3390/plants11131640
- Lytkin K., Nosulchak V., Agakhanov M., Matveikina E., Lushchay E., Karzhaev D., Raines E., Vasylyk I., Rybachenko N., Grigoreva E., Volkov V., Volynkin V., Gentzmittel L., Potokina E. Development of a High-Density Genetic Map for Muscadine Grape Using a Mapping Population from Selfing of the Perfect-Flowered Vine 'Dixie'. *Plants*. 2022;11(23):3231. DOI: 10.3390/plants11233231
- Popov V.S., Khoreva V.I., Konarev A.V., Shelenga T.V., Blinova E.V., Malyshev L.L., Loskutov I.G. Evaluating Germplasm of Cultivated Oat Species from the VIR Collection under the Russian Northwest Conditions. *Plants*. 2022;11(23):3280. DOI: 10.3390/plants11233280
- Porokhovina E.A., Shelenga T.V., Kerv Y.A., Khoreva V.I., Konarev A.V., Yakusheva T.V., Pavlov A.V., Slobodkina A.A., Brutch N.B. Features of Profiles of

**Федеральный исследовательский центр Всероссийский институт генетических ресурсов растений имени Н.И. Вавилова**  
**N.I. Vavilov All-Russian Institute of Plant Genetic Resources**

- Biologically Active Compounds of Primary and Secondary Metabolism of Lines from VIR Flax Genetic Collection, Contrasting in Size and Color of Seeds. *Plants*. 2022;11(6):750. DOI: 10.3390/plants11060750
- Radchenko E.E., Abdullaev R.A., Anisimova I.N. Genetic Resources of Cereal Crops for Aphid Resistance. *Plants*. 2022;11(11):1490. DOI: 10.3390/plants11111490
- Razgonova Mayya P., Burlyayeva Marina O., Zinchenko Yulia N., Krylova Ekaterina A., Chunikhina Olga A., Ivanova Natalia M., Zakharenko Alexander M., Golokhvast Kirill S. Identification and Spatial Distribution of Bioactive Compounds in Seeds *Vigna unguiculata* (L.) Walp. by Laser Microscopy and Tandem Mass Spectrometry. *Plants*. 2022;11(16):2147. DOI: 10.3390/plants11162147
- Razgonova M., Zinchenko Y., Pikula K., Tekutyeva L., Son O., Zakharenko A., Kalenik T., Golokhvast K. Spatial Distribution of Polyphenolic Compounds in Corn Grains (*Zea mays* L. var. *Pioneer*) Studied by Laser Confocal Microscopy and High-Resolution Mass Spectrometry. *Plants*. 2022;11(5):630. DOI: 10.3390/plants11050630
- Smolikova G., Strygina K., Krylova E., Bilova T., Medvedev S., Khlestkina E., Vikhorev A., Frolov A. Seed-to-Seedling Transition in *Pisum sativum* L.: A Transcriptomic Approach. *Plants*. 2022;11(13):1686. DOI: 10.3390/plants11131686
- Temirbekova Sulukhan K., Kulikov Ivan M., Ashirbekov Mukhtar Z., Afanasyeva Yuliya V., Beloshapkina Olga O., Tyryshkin Lev G., Zuev Evgeniy V., Kirakosyan Rima N., Glinushkin Alexey P., Potapova Elena S., Rebouh Nazih Y. Evaluation of Wheat Resistance to Snow Mold Caused by *Microdochium nivale* (Fr) Samuels and I.C. Hallett under Abiotic Stress Influence in the Central Non-Black Earth Region of Russia. *Plants*. 2022;11(5):699. DOI: 10.3390/plants11050699
- Tyryshkin L.G., Lysenko N.S., Kolesova M.A. Effective Resistance to Four Fungal Foliar Diseases in Samples of Wild *Triticum* L. Species from the VIR (N.I. Vavilov All-Russian Institute of Plant Genetic Resources) Collection: View from Vavilov's Concepts of Plant Immunity. *Plants*. 2022;11(24):346. DOI: 10.3390/plants11243467
- Ozerski P.V. On colour variability of the common green grasshopper *Omocestus viridulus* (Orthoptera: Acrididae) in northwestern Russia. *Proceedings of the Zoological Institute RAS*. 2022;326(2):115-124. DOI: 10.31610/trudyzin/2022.326.2.115
- Abdullaev R.A., Anisimova I.N., Kovaleva O.N., Radchenko E.E. Juvenile resistance of barleys from the East Asian center of crop origin and domestication to powdery mildew. *Proceedings on applied botany, genetics and breeding*. 2022;183(3):188-193. DOI: 10.30901/2227-8834-2022-3-188-193
- Askhadullin D.F., Askhadullin D.F., Vasilova N.Z., Brykova A.N. Earliness of spring bread wheat accessions under the conditions of the Middle Volga Region. *Proceedings on applied botany, genetics and breeding*. 2022;183(3):66-75. <https://doi.org/10.30901/2227-8834-2022-3-66-75>
- Barsukova O.N. Biodiversity of East Asian apple-tree species and their use in breeding. *Proceedings on applied botany, genetics and breeding*. 2022;183(4):12-18. DOI: 10.30901/2227-8834-2022-4-12-18
- Chepinoga I.S. Introduction and studying of the species polymorphism in the almond genetic diversity preserved at Krymsk Experiment Breeding Station of VIR in the prebreeding stage. *Proceedings on applied botany, genetics and breeding*. 2022;183(2):103-112. DOI: 10.30901/2227-8834-2022-2-103-112
- Chukhina I.G., Miftakhova S.R. Russian translation of the International code of nomenclature for cultivated Plants. *Proceedings on applied botany, genetics and breeding*. 2022;183(3):183-187. DOI: 10.30901/2227-8834-2022-3-183-187
- Dunaeva S.E., Krasovskaya L.S., Gavrilenko T.A. *Ex situ* conservation of *Rubus* L. (Rosaceae) genetic resources (a review). *Proceedings on applied botany, genetics and breeding*. 2022;183(1):236-253. DOI: 10.30901/2227-8834-2022-1-236-253
- Drugova E.V., Ozerskaya T.M. VIR and Leningrad Quarantine Laboratory: 90 years of cooperation. *Proceedings on applied botany, genetics and breeding*. 2022;183(4):251-261. DOI: 10.30901/2227-8834-2022-4-251-261
- Fadeeva I.D., Ignatieva I.Yu., Khakimova A.G., Mitrofanova O.P. Source material for breeding winter bread wheat for grain quality in the north of the Middle Volga Region. *Proceedings on applied botany, genetics and breeding*. 2022;183(1):118-126. DOI: 10.30901/2227-8834-2022-1-118-126
- Glagoleva A.Y., Novokreschenov L.A., Shoeva O.Y., Kovaleva O.N., Khlestkina E.K. Studying grain color diversity in the barley collection of VIR. *Proceedings on applied botany, genetics and breeding*. 2022;183(3):76-84. DOI: 10.30901/2227-8834-2022-3-76-84

**Федеральный исследовательский центр Всероссийский институт генетических ресурсов растений имени Н.И. Вавилова**  
**N.I. Vavilov All-Russian Institute of Plant Genetic Resources**

- Gulyaeva E.I., Shaydayuk E.L., Veselova V.V., Smirnova R.E., Zuev E.V., Khakimova A.G., Mitrofanova O.P. Diversity of new Russian bread wheat cultivars according to leaf rust resistance genes. *Proceedings on applied botany, genetics and breeding*. 2022;183(4):208-218. DOI: 10.30901/2227-8834-2022-4-208-218
- Kalybekova Z.T., Tsygankov V.I., Zuev E.V., Novikova L.Yu. The use of drought resistance indices in the study of the spring bread wheat collection under the conditions of Aktobe Region. *Proceedings on applied botany, genetics and breeding*. 2022;183(3):85-95. DOI: 10.30901/2227-8834-2022-3-85-95
- Khatefov E.B., Grushin A.A., Boyko V.N. Cytogenetic factors decreasing the fertility of pollen and cobs during clogging of tetraploid maize with triploid grains (*Zea mays* L.). *Proceedings on applied botany, genetics and breeding*. 2022;183(1):135-146. DOI: 10.30901/2227-8834-2022-1-135-146
- Khlestkina E.K. A strategy of the new “green revolution” in wheat breeding: celebrating the jubilee of Lyudmila A. Bespalova, Full Member of the Russian Academy of Sciences. *Proceedings on applied botany, genetics and breeding*. 2022;183(1):254-258. DOI: 10.30901/2227-8834-2022-1-254-258
- Khlestkina E.K. Genetic resources in Russia: from collections to bioresource centers. *Proceedings on applied botany, genetics and breeding*. 2022;183(1):9-30. DOI: 10.30901/2227-8834-2022-1-9-30
- Khodzhaeva N.A., Podolnaya L.P. Analysis of the relationship between cotton fiber quality and weather conditions in the southeast of Stavropol Territory. *Proceedings on applied botany, genetics and breeding*. 2022;183(3):48-58. DOI: 10.30901/2227-8834-2022-3-48-58
- Lenivtseva M.S., Kuznetsova A.P., Radchenko E.E. Leaf spot resistance in sweet and sour cherries. *Proceedings on applied botany, genetics and breeding*. 2022;183(2):177-182. DOI: 10.30901/2227-8834-2022-2-177-182
- Loskutov I.G., Butris V., Kosareva I.A., Blinova E.V., Novikova L.Yu. Aluminum tolerance and micronutrient content in the grain of oat cultivars with different levels of breeding improvement from the VIR collection. *Proceedings on applied botany, genetics and breeding*. 2022;183(3):96-110. DOI: 10.30901/2227-8834-2022-3-96-110
- Loskutov I.G., Shelenga T.V., Konarev A.V., Khoreva V.I., Kerv Yu.A., Blinova E.V., Gnutikov A.A., Rodionov A.V., Malyshev L.L. Assessment of oat varieties with different levels of breeding refinement from the Vavilov Institute’s collection applying the method of metabolomic profiling. *Proceedings on applied botany, genetics and breeding*. 2022;183(1):104-117. DOI: 10.30901/2227-8834-2022-1-104-117
- Miftakhova S.R., Abramova L.M., Saifullina N.M., Yusupova O.V. Crop wild relatives in the protected areas of the Republic of Bashkortostan. *Proceedings on applied botany, genetics and breeding*. 2022;183(4):181-191. DOI: 10.30901/2227-8834-2022-4-181-191
- Mikhailova I.V., Khvostova A.B., Malyshev L.L. Comparative analysis of fodder legumes in Murmansk Province. *Proceedings on applied botany, genetics and breeding*. 2022;183(4):122-131. DOI: 10.30901/2227-8834-2022-4-122-131
- Podorozhniy V.N., Piyanina N.A. Improvement of the technique applied to preserve species and varieties of *Fragaria* L. in the field genebank at Krymsk Experiment Breeding Station of VIR. *Proceedings on applied botany, genetics and breeding*. 2022;183(2):9-16. DOI: 10.30901/2227-8834-2022-2-9-16
- Sherstobitov V.V., Bandurko I.A., Ozerski P.V. Analysis of the data obtained while studying European plum (*Prunus domestica* L.) cultivars developed at Maikop Experiment Station of VIR. *Proceedings on applied botany, genetics and breeding*. 2022;183(2):113-121. DOI: 10.30901/2227-8834-2022-2-113-121
- Semenova E.V., Vasipov V.V., Anisimova I.N. Identification of duplicate accessions in the pea (*Pisum sativum* L.) collection at VIR. *Proceedings on applied botany, genetics and breeding*. 2022;183(1):147-156. DOI: 10.30901/2227-8834-2022-1-147-156
- Sokolova D.V. Genetic diversity of the table beet (*Beta* L.) collection at VIR as a potential source for breeding (a review). *Proceedings on applied botany, genetics and breeding*. 2022;183(4):239-250. DOI: 10.30901/2227-8834-2022-4-239-250
- Tikhonova O.A. Morphometric parameters of black currant berries and racemes under the conditions of Northwest Russia. *Proceedings on applied botany, genetics and breeding*. 2022;183(2):90-102. DOI: 10.30901/2227-8834-2022-2-90-102
- Zakharova Yu.A., Frolov A.N., Artyemyeva A.M. Monitoring of the diamondback moth (*Plutella xylostella* L.) on the *Brassica oleracea* L. collection in the vicinity of St. Petersburg. *Proceedings on applied botany, genetics and breeding*. 2022;183(4):219-228. DOI: 10.30901/2227-8834-2022-4-219-228
- Zhigadlo T.E. Evaluation of improved potato cultivars according to their agronomic traits under the conditions of Murmansk Province. *Proceedings on applied*

**Федеральный исследовательский центр Всероссийский институт генетических ресурсов растений имени Н.И. Вавилова**  
**N.I. Vavilov All-Russian Institute of Plant Genetic Resources**

*botany, genetics and breeding*. 2022;183(4):107-114. DOI: 10.30901/2227-8834-2022-4-107-114

Zoteyeva N.M., Evdokimova Z.Z. Source material from crosses among *Solanum* L. spp. for potato breeding. *Proceedings on applied botany, genetics and breeding*. 2022;183(4):115-121. DOI: 10.30901/2227-8834-2022-4-115-121

Mursalimov S., Glagoleva A., Khlestkina E., Shoeva O. Chlorophyll deficiency delays but does not prevent melanogenesis in barley seed melanoplasts. *Protoplasma*. 2022;259:317-326. DOI: 10.1007/s00709-021-01669-3

Gurina A.A., Alpatieva N.V., Chalaya N.A., Mironenko N.V., Khiutti A.V., Rogozina E.V. Homologs of Late Blight Resistance Genes in Representatives of Tuber-Bearing Species of the Genus *Solanum* L. *Russian Journal of Genetics*. 2022;58(12):1473-1484. DOI: 10.1134/S1022795422120043

Filyushin M.A., Khatefov E.B., Kochieva E.Z., Shchennikova A.V. Comparative Analysis of Transcription Factor Genes *liguleless1* and *liguleless1-like* in Teosinte and Modern Maize Accessions. *Russian Journal of Genetics*. 2022;58(3):296-306. DOI: 10.31857/S0016675822030055

Strygina K.V., Elatskova A.G., Elatskov Y.A., Tekhanovich G.A., Khlestkina E.K. Analysis of the Genes That Determine the Dwarf Form of Watermelon *Citrullus lanatus* (Thunb.) Matsum. & Nakai in the VIR Collection. *Russian Journal of Genetics*. 2022;58(12):1457-1472. DOI: 10.1134/S1022795422120134

Arkhestova D.Kh., Kulakova A.V., Khatefov E.B., Shchennikova A.V., Kochieva E.Z. Expression of the lycopene- $\epsilon$ -cyclase LcyE gene correlates with the content of  $\beta$ -carotene and chlorophylls in maize vegetative tissue. *Sel'skokhozyaistvennaya Biologiya [Agricultural Biology]*. 2022;57(5):945-953. DOI: 10.15389/agrobiology.2022.5.945eng

Ulianich P.S., Belimov A.A., Kuznetsova I.G., Sazanova A.L., Yuzikhin O.S., Laktionov Yu.V., Karlov D.S., Vishnyakova M.A., Safronova V.I. Effectiveness of nitrogen-fixing symbiosis of guar (*Cyamopsis tetragonoloba*) with strains *Bradyrhizobium retamae* RCAM05275 and *Ensifer aridi* RCAM05276 in pot experiment. *Sel'skokhozyaistvennaya Biologiya [Agricultural Biology]*. 2022;57(3):555-565. DOI: 10.15389/agrobiology.2022.3.555eng

Razgonova M.P., Tekutyeva L.A., Podvolotskaya A.B., Stepochkina V.D., Zakharenko A.M., Golokhvast K. *Zostera marina* L.: Supercritical CO<sub>2</sub>-Extraction and Mass Spectrometric Characterization of Chemical Constituents Recovered from Seagrass. *Separations: Open Access Separation Science Journal*. 2022;9(7):182. DOI: 10.3390/separations9070182

Aleksandrova T.G., Alexeeva T.V., Andriyanova E.A., Banaev E.V., Bobrov A.A., Boltenev E.V., Bondarevich E.A., Boyarskikh I.G., Chernyagina O.A., Chimitov D.G., Dyubenko T.V., Dzyubenko E.A., Ebel A.L., Erst A.S., Erst A.A., Ghukasyan A.G., Khoreva M.G., Knyazev M.S., Kotseruba V.V., Krivenko D.A., Kuzmina P.A., Machs E.M., Malysheva N.Yu., Mitrenina E.Yu., Mochalova O.A., Myakoshina Yu.A., Nersesyan A.A., Ostroumova T.A., Pankova T.V., Pendenin G.I., Pimenov M.G., Poliakova T.A., Probatova N.S., Pshenichkina Yu.A., Rodionov A.V., Shatokhina A.V., Shaulo D.N., Shner Ju.V., Tomoshevich M.A., Vishnyakov V.S., Wang W., Zykova E.Yu. IAPT chromosome data 38. *Taxon*. 2022;71(6):1353-1360. DOI: 10.1002/tax.12836

Brutch E., Zabegaeva O., Nozkova J., Brutch N. Cadmium tolerance and its absorption ability in fibre flax and linseed variet. *Turkish Journal of Agriculture and Forestry*. 2022;46(1):83-89. DOI: 10.3906/tar-2011-118

Mikhailova Aleksandra, Strygina Ksenia, Khlestkina Elena. In silico analysis of the regulatory gene families for proanthocyanidins biosynthesis in the genus *Gossypium* L. *Turkish Journal of Agriculture and Forestry*. 2022;46(5):11. DOI: 10.55730/1300-011X.3039

Novikova L., Seferova, I., Matvienko I., Schedrina Z., Vishnyakova M. Photoperiod and temperature sensitivity in early soybean accessions from the VIR collection in Leningrad Province of the Russian Federation. *Turkish Journal of Agriculture and Forestry*. 2022;46(6):947-954. DOI: 10.55730/1300-011X.3055

Khafizova G.V., Matveeva T.V. Agrobacterium-mediated transformation of *Nicotiana glauca* and *Nicotiana sylvestris*. *Vavilovskii Zhurnal Genetiki i Selektzii = Vavilov Journal of Genetics and Breeding*. 2022;26(7):697-703. DOI: 10.18699/VJGB-22-84

Lukina K.A., Kovaleva O.N., Loskutov I.G. Naked barley: taxonomy, breeding, and prospects of utilization. *Vavilovskii Zhurnal Genetiki i Selektzii = Vavilov Journal of Genetics and Breeding*. 2022;26(6):524-536. DOI: 10.18699/VJGB-22-64

Novikova L.Yu., Ozerski P.V. Forecast for the zone of viticulture in European Russia under climate change. *Vavilovskii Zhurnal Genetiki i Selektzii = Vavilov Journal of Genetics and Breeding*. 2022;26(3):264-271. DOI: 10.18699/VJGB-22-33

**Федеральный исследовательский центр Всероссийский институт генетических ресурсов растений имени Н.И. Вавилова  
N.I. Vavilov All-Russian Institute of Plant Genetic Resources**

Porotnikov I.V., Mitrofanova O.P., Antonova O.Yu. A system of molecular markers to identify alleles of the *Rht-B1* and *Rht-D1* genes controlling reduced height in bread wheat. *Vavilovskii Zhurnal Genetiki i Seleksii = Vavilov Journal of Genetics and Breeding*. 2022;26(2):128-138. DOI: 10.18699/VJGB-22-16

Razgonova M.P., Kon'kova N.G., Zakharenko A.M., Golokhvast K.S. Polyphenols of *Perilla frutescens* of the family Lamiaceae identified by tandem mass spectrometry. *Vavilovskii Zhurnal Genetiki i Seleksii = Vavilov Journal of Genetics and Breeding*. 2022;26(7):637-644. DOI: 10.18699/VJGB-22-78

Shelenga T.V., Popov V.S., Konarev A.V., Tikhonova N.G., Tikhonova O.A., Kerv Yu.A., Smolenskaya A.E., Malyshev L.L. Metabolomic profiles of *Ribes nigrum* L. and *Lonicera caerulea* L. from the collection of the N.I. Vavilov Institute in the setting of Northwest Russia. *Vavilovskii Zhurnal Genetiki i Seleksii = Vavilov Journal of Genetics and Breeding*. 2022;26(7):630-636. DOI: 10.18699/VJGB-22-77

Semenova E.V., Boyko A.P., Novikova L.Y., Vishnyakova M.A. Phenotypic traits differentiating the genetic resources of pea (*Pisum sativum* L.) by the type of use. *Vavilovskii Zhurnal Genetiki i Seleksii = Vavilov Journal of Genetics and Breeding*. 2022;26(7):599-608. DOI: 10.18699/VJGB-22-74

Smolenskaya S.E., Efimov V.M., Kruchinina Yu.V., Nemtsev B.F., Chepurinov G.Yu., Ovchinnikova E.S., Belan I.A., Zuev E.V., Zhou Chenxi, Piskarev V.V., Goncharov N.P. Earliness and morphotypes of common wheat cultivars of Western and Eastern Siberia. *Vavilovskii Zhurnal Genetiki i Seleksii = Vavilov Journal of Genetics and Breeding*. 2022;26(7):662-674. DOI: 10.18699/VJGB-22-81

Sokolova D.V. Dynamic changes in betanin content during the growing season of table beet: their interplay with abiotic factors. *Vavilovskii Zhurnal Genetiki i Seleksii = Vavilov Journal of Genetics and Breeding*. 2022;26(1):30-39. DOI: 10.18699/VJGB-22-05

Ulyanov A.V., Karlov A.V., Khatefov E.B. The use of maize haploidy inducers as a tool in agricultural plant biotechnology. *Vavilovskii Zhurnal Genetiki i Seleksii = Vavilov Journal of Genetics and Breeding*. 2022;26(7):704-713. DOI: 10.18699/VJGB-22-85

