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

НАУЧНЫЕ ПУБЛИКАЦИИ СОТРУДНИКОВ ВИР В ЖУРНАЛАХ, ИНДЕКСИРУЕМЫХ В БАЗАХ ДАННЫХ «СЕТЬ НАУКИ» (WEB OF SCIENCE) И SCOPUS. 2024 г. (на 18.08.2024)

Artemyeva A.M. VIR worldwide collection of vegetable and cucurbit crops: formation, status and modern research activities. *Acta Horticulturae*. 2024;1391:283-290. DOI: 10.17660/ActaHortic.2024.1391.39

Kurina A.B., Smirnova I.V., Solovieva A.E. Variability of sugar content of the VIR root chicory collection under different sites of cultivation. *Acta Horticulturae*. 2024;1391:291-296. DOI: 10.17660/ActaHortic.2024.1391.40

Kukoeva T.V., Molobekova C.A., Totsky I.V., Vasiliev G.V., Pronozin A.Y., Afonnikov D.A., Khlestkina E.K., Shoeva O.Y. Enrichment of Grain Anthocyanin Content through Marker-Assisted Breeding for *Ant1*, *Ant2* or *HvMyc2* Genes in Barley (*Hordeum vulgare* L.). *Agronomy*. 2024;14(6):1231. DOI: 10.3390/agronomy14061231

Sokolova D.V., Shvachko N.A., Mikhailova A.S., Popov V.S., Solovyeva A.E., Khlestkina E.K. Characterization of Betalain Content and Antioxidant Activity Variation Dynamics in Table Beets (*Beta vulgaris* L.) with Differently Colored Roots. *Agronomy*. 2024;14(5):999. DOI: 10.3390/agronomy14050999

Solovyeva A., Rogozina E., Chalaya N., Sitnikov M. Biochemical Composition of Tubers of New Russian Potato Cultivars. *Agronomy*. 2024;14(4):834. DOI: 10.3390/agronomy14040834

Novikova I.I., Kolesnikov L.E., Popova E.V., Hassan B.A., Priyatkin N.S., Radishevskiy D.Y., Krasnobaeva I.L., Higerovich L.A., Kolesnikova Yu.R. The Biological Efficiencies of Multifunctional Complexes Based on *Bacillus subtilis* Strains and Chitosan Salicylate in Wheat Cultivation. *Applied Biochemistry and Microbiology*. 2024;60(2):251-263. DOI: 10.1134/S0003683824020133

Lavrent'yeva S.I., Ivachenko L.E., Blinova A.A., Bondarenko O.N., Kuznetsova V.A. Chemical Composition of Seeds in Soybean *Glycine soja* (Fabaceae) of Amur Oblast. *Doklady Biological Sciences*. 2024. DOI: 10.1134/S0012496624701114

Khatefov E.B., Bogdan P.M., Grushin A.A., Fil I.V., Sherstobitov V.V., Boyko V.N. Sources and donors of the multi-row ear trait for hybrid breeding of corn in the VIR collection. *Ecological genetics*. 2024;22(2):151-160. DOI: 10.17816/ecogen625673

Glagoleva A.Y., Kukoeva T.V., Khlestkina E.K., Shoeva O.Y. Polyphenol oxidase genes in barley (*Hordeum vulgare* L.): functional activity with respect to black grain pigmentation. *Frontiers in Plant Science*. 2024;14:1320770. DOI: 10.3389/fpls.2023.1320770

Widener S., Njuguna J.N., Clark L.V., Anzoua K.G., Bagmet L., Chebukin P., Dwiyanti M.S., Dzyubenko E., Dzyubenko N., Ghimire B.K., Jin X., Jørgensen U., Kjeldsen J.B., Nagano H., Peng Ju., Petersen K.K., Sabitov A., Seong E.S., Yamada T., Yoo Ji.H., Yu C.Y., Zhao H., Jarquin D., Sacks E., Lipka A.E. Genotype by environment model predictive ability in *Miscanthus*. *GCB Bioenergy*. 2024;16(1):e13113. DOI: 10.1111/gcbb.13113

Samarina L., Malyukova L., Koninskaya N., Malyarovskaya V., Ryndin A., Tong W., Xia E., Khlestkina E. Efficient vegetation indices for phenotyping of abiotic stress tolerance in tea plant (*Camellia sinensis* (L.) Kuntze). *Heliyon*. 2024;10(15):e35522. DOI: 10.1016/j.heliyon.2024.e35522

Kolesnikov L.E., Hassan B.A., Belimov A.A., Orlova A.G., Minakov D.S., Kolesnikova Yu.R. Application of Associative Rhizobacteria for Increasing the Soft Wheat Productivity and Reducing the Diseases Harmfulness. *Indian Journal of Agricultural Research*. 2024;58(1):63-69. DOI: 10.18805/IJARe.AF-766

Amosova A.V., Gnutikov A.A., Rodionov A.V., Loskutov I.G., Nosov N.N., Yurkevich O.Y., Samatadze T.E., Zoshchuk S.A., Muravenko O.V. Genome Variability in Artificial Allopolyploid Hybrids of *Avena sativa* L. and *Avena macrostachya* Balansa. ex Coss. et Durieu Based on Marker Sequences of Satellite DNA and the ITS1–5.8S rDNA Region. *International Journal of Molecular Sciences*. 2024;25(10):5534. DOI: 10.3390/ijms25105534

Tikhonova M.A., Shoeva O.Y., Tenditnik M.V., Akopyan A.A., Litvinova E.A., Popova N.A., Amstislavskaya T.G., Khlestkina E.K. Antitumor Effects of an Anthocyanin-Rich Grain Diet in a Mouse Model of Lewis Lung Carcinoma. *International Journal of Molecular Sciences*. 2024;25(11):5727. DOI: 10.3390/ijms25115727

Pasternak T., Pérez-Pérez J.M., Ruperti B., Aleksandrova T., Palme K. A New In Vitro Growth System for Phenotypic Characterization and Seed Propagation of *Arabidopsis thaliana*. *Journal of Plant Growth Regulation*. 2024;43(2):652-658. DOI: 10.1007/s00344-023-11093-x

Razgonova M.P., Sabitov A.S., Zinchenko Y.N., Senotrusova T.A., Li N.G., Vitomskova E.A., Golokhvast K.S. *Ribes fragrans* Pallas: supercritical CO_2 extraction and

НАУЧНЫЕ ПУБЛИКАЦИИ СОТРУДНИКОВ ВИР В ЖУРНАЛАХ, ИНДЕКСИРУЕМЫХ В БАЗАХ ДАННЫХ «СЕТЬ НАУКИ» (WEB OF SCIENCE) И SCOPUS. 2024 г. (на 18.08.2024)

tandem mass spectrometry. *Khimiya Rastitel'nogo Syr'ya = Chemistry of plant raw material*. 2024;(1):260-275. DOI: 10.14258/jcprm.20240113178

Antonova E.V., Shimalina N.S., Korotkova A.M., Kolosovskaya E.V., Gerasimova S.V., Khlestkina E.K. Germination and Growth Characteristics of *nud* Knockout and *win1* Knockout Barley Lines under Salt Stress. *Plants*. 2024;13(9):1169. DOI: 10.3390/plants13091169

Artemyeva, A.M., Kurina, A.B. Eco-Geographical and Botanical Patterns of Resistance to Lepidoptera Insects in *Brassica rapa* L. *Plants*. 2024;13(5):673. DOI: 10.3390/plants13050673

Fizikova, A., Subcheva, E., Kozlov, N., Tvorogova V., Samarina L., Lutova, L., Khlestkina, E. *Agrobacterium* Transformation of Tea Plants (*Camellia sinensis* (L.) *KUNTZE*): A Small Experiment with Great Prospects. *Plants*. 2024;13(5):675. DOI: 10.3390/plants13050675

Gnutikov A.A., Nosov N.N., Punina E.O., Loskutov I.G., Shneyer V.S., Chekrygin S.A., Rodionov A.V. Hybridization in the Subtribe Alopecurinae Dumort. (Poaceae) According to Molecular Phylogenetic Analysis: Different Ploidy Level Tells Different Origin of the Groups. *Plants*. 2024;13(7):919. DOI: 10.3390/plants13070919

Kon'kova N.G., Khoreva V.I., Popov V.S., Yakusheva T.V., Malyshev L.L., Solovyeva A.E., Shelenga T.V. Variability of the Main Economically Valuable Characteristics of *Cyperus esculentus* L. in Various Ecological and Geographical Conditions. *Plants*. 2024;13(2):308. DOI: 10.3390/plants13020308

Krasnoperova E.Y., Tvorogova V.E., Smirnov K.V., Efremova E.P., Potsenkovskaia E.A., Artemiuk A.M., Konstantinov Z.S., Simonova V.Y., Brynchikova A.V., Yakovleva D.V., Pavlova D.B., Lutova L.A. *MtWOX2* and *MtWOX9-1* Effects on the Embryogenic Callus Transcriptome in *Medicago truncatula*. *Plants*. 2023;13(1):102. DOI: 10.3390/plants13010102

Lukina K.A., Porotnikov I.V., Antonova O.Y., Kovaleva O.N. Determination of the Allelic Composition of the *sdw1/denso* (*HvGA20ox2*), *uzu1* (*HvBRI1*) and *ari-e* (*HvDep1*) Genes in Spring Barley Accessions from the VIR Collection. *Plants*. 2024;13(3):376. DOI: 10.3390/plants13030376

Pavlov A.V., Porokhovinova E.A., Slobodkina A.A., Matvienko I.I., Kishlyan N.V., Brutch N.B. Influence of Weather Conditions in the Northwestern Russian Federation on Flax Fiber Characters According to the Results of a 30-Year Study. *Plants*. 2024;13(6):762. DOI: 10.3390/plants13060762

Radchenko E.E., Anisimova I.N., Ryazanova M.K., Kibkalo I.A., Alpatieva N.V. Newly Developed Restorer Lines of Sorghum [*Sorghum bicolor* (L.) Moench] Resistant to Greenbug. *Plants*. 2024;13(3):425. DOI: 10.3390/plants13030425

Shvachko N., Solovyeva M., Rozanova I., Kibkalo I., Kolesova M., Brykova A., Andreeva A., Zuev E., Börner A., Khlestkina E. Mining of QTLs for Spring Bread Wheat Spike Productivity by Comparing Spring Wheat Cultivars Released in Different Decades of the Last Century. *Plants*. 2024;13(8):1081. DOI: 10.3390/plants13081081

Smolikova G., Krylova E., Petřík I., Vilis P., Vikhorev A., Strygina K., Strnad M., Frolov A., Khlestkina E., Medvedev S. Involvement of Abscisic Acid in Transition of Pea (*Pisum sativum* L.) Seeds from Germination to Post-Germination Stages. *Plants*. 2024;13(2):206. DOI: 10.3390/plants13020206

Yakovleva D.V., Efremova E.P., Smirnov K.V., Simonova V.Y., Konstantinov Z.S., Tvorogova V.E., Lutova L.A. The *WOX* Genes from the Intermediate Clade: Influence on the Somatic Embryogenesis in *Medicago truncatula*. *Plants*. 2024;13(2):223. DOI: 10.3390/plants13020223

Zuev E.V., Lebedeva T.V., Yakovleva O.V., Kolesova M.A., Brykova A.N., Lysenko N.S., Tyryshkin L.G. Genetic Diversity for Effective Resistance in Wheat Landraces from Ethiopia and Eritrea to Fungal Diseases and Toxic Aluminum Ions. *Plants*. 2024;13(8):1166. DOI: 10.3390/plants13081166

Agakhanov M.M., Bagmet L.V., Tikhonova N.G., Erastenkova M.V., Kislin E.N., Ukhatova Yu.V., Khlestkina E.K. The plant germplasm and herbarium (WIR) collections maintained at VIR as contributors to grape genetic diversity conservation, expansion and utilization. *Proceedings on applied botany, genetics and breeding*. 2024;185(1):191-211. DOI: 10.30901/2227-8834-2024-1-191-211

Arkhestova D.Kh., Yakhutlova A.A., Khaudov A.D., Sokurova L.Kh., Kulemina T.V. Effectiveness of ISSR markers for detecting genomic variability in *Panicum miliaceum* L. accessions. *Proceedings on applied botany, genetics and breeding*. 2024;185(1):161-171. DOI: 10.30901/2227-8834-2024-1-161-171

Butovets E.S., lukyanchuk l.M., Kodirova G.A., Kubankova G.V., Efremova O.S. Studying regenerated soybean lines for their useful agronomic and biochemical

НАУЧНЫЕ ПУБЛИКАЦИИ СОТРУДНИКОВ ВИР В ЖУРНАЛАХ, ИНДЕКСИРУЕМЫХ В БАЗАХ ДАННЫХ «СЕТЬ НАУКИ» (WEB OF SCIENCE) И SCOPUS. 2024 г. (на 18.08.2024)

characteristics. *Proceedings on applied botany, genetics and breeding*. 2024;185(2):38-49. DOI: 10.30901/2227-8834-2024-2-38-49

Ivashchenko A.D., Sherstyukova T.P., Khasbiullina O.I., Rogozina E.V. Breeding value of potato hybrid clones from the VIR collection revealed in the environments of Kamchatka Territory. *Proceedings on applied botany, genetics and breeding*. 2024;185(1):51-63. DOI: 10.30901/2227-8834-2024-1-51-63

Kharchenko A.A., Belevtsova V.I., Chukhina I.G. Strawberry cultivars with *Fragaria orientalis* Losinsk. in their pedigrees. *Proceedings on applied botany, genetics and breeding*. 2024;185(2):189-200. DOI: 10.30901/2227-8834-2024-2-189-200

Loskutov I.G., Blinova E.V., Novikova L.Yu. Evaluation of aluminum tolerance diversity in *Avena sativa* L. from the VIR collection. *Proceedings on applied botany, genetics and breeding*. 2024;185(1):129-138. DOI: 10.30901/2227-8834-2024-1-129-138

Lyapunova O.A. Landraces of durum wheat (*Triticum durum* Desf.) in the VIR collection. *Proceedings on applied botany, genetics and breeding*. 2024;185(2):9-24. DOI: 10.30901/2227-8834-2024-2-9-24

Mikhailova A.S., Sokolova D.V., Shvachko N.A., Popov V.S., Khlestkina E.K. Allelic differences in the key genes of betalain biosynthesis in table beet accessions with contrasting root color from the VIR collection. *Proceedings on applied botany, genetics and breeding*. 2024;185(1):139-151. DOI: 10.30901/2227-8834-2024-1-139-151

Mironenko N.V., Kovalenko N.M., Baranova O.A., Khakimova A.G., Mitrofanova O.P. Seedling resistance of winter and spring bread wheat cultivars to *Pyrenophora tritici-repentis*. *Proceedings on applied botany, genetics and breeding*. 2024;185(2):95-105. DOI: 10.30901/2227-8834-2024-2-95-105

Petrova L.V., Novikova L.Yu., Alekseeva A.V., Loskutov I.G. Climate change and crop yield of oats (Avena sativa L.) in Yakutia. *Proceedings on applied botany, genetics and breeding*. 2024;185(1):86-98. DOI: 10.30901/2227-8834-2024-1-86-98

Popov V.S., Salikova A.V., Perchuk I.N., Konkova N.G., Egorova G.P., Vishnyakova M.A., Shelenga T.V. Rapid assessment of the main economic value indicators in lupine flour samples using infrared spectroscopy. *Proceedings on applied botany, genetics and breeding*. 2024;185(1):99-108. DOI: 10.30901/2227-8834-2024-1-99-108

Popov V.S., Shelenga T.V., Kovaleva O.N., Khoreva V.I. Methodological aspects of using NIR spectroscopy to assess biochemical indicators in barley grain. *Proceedings on applied botany, genetics and breeding*. 2024;185(1):109-117. DOI: 10.30901/2227-8834-2024-1-109-117

Rigin B.V., Loskutov I.G., Matvienko I.I., Shchedrina Z.A., Abdullaev R.A., Zuev E.V., Radchenko E.E. Contribution of Dr. Vladimir A. Koshkin to the development of plant physiology at VIR. *Proceedings on applied botany, genetics and breeding*. 2024;185(2):219-228. DOI: 10.30901/2227-8834-2024-2-219-228

Shergina A.A., Kurina A.B. Androgenesis and gynogenesis in tomato (*Solanum lycopersicum* L.) *in vitro*. *Proceedings on applied botany, genetics and breeding*. 2024;185(1):224-232. DOI: 10.30901/2227-8834-2024-1-224-232

Sherstobitov V.V., Kolesova M.A. Resistance of European plum to fungal diseases in the foothill zone of Adygea. *Proceedings on applied botany, genetics and breeding.* 2024;185(2):210-218. DOI: 10.30901/2227-8834-2024-2-210-218

Shipilina L.Yu., Khmelinskaya T.V. Collections of the wild *Daucus carota* L. preserved at VIR. *Proceedings on applied botany, genetics and breeding*. 2024;185(1):16-26. DOI: 10.30901/2227-8834-2024-1-16-26

Sokolova D.V., Piskunova T.M. Valentin I. Burenin. The entire life was dedicated to science. *Proceedings on applied botany, genetics and breeding*. 2024;185(1):233-240. DOI: 10.30901/2227-8834-2024-1-233-240

Zoteyeva N.M., Kosareva O.S., Rogozina E.V., Chalaya N.A. Resistance of potato cultivars and hybrid clones from the VIR collection to the northwestern population of *Phytophthora infestans*. *Proceedings on applied botany, genetics and breeding*. 2024;185(2):201-209. DOI: 10.30901/2227-8834-2024-2-201-209

Zoteyeva N.M., Porokhovinova E.A., Fateev D.A., Chalaya N.A. Leaf and tuber resistance to *Phytophthora infestans* and relationship between these traits in wild potato species. *Proceedings on applied botany, genetics and breeding*. 2024;185(1):172-183. DOI: 10.30901/2227-8834-2024-1-172-183

Razgonova M.P., Nawaz M.A., Ivanova E.P., Cherevach E.I., Golokhvast K.S. Supercritical CO_2-Based Extraction and Detection of Phenolic Compounds and Saponins from

НАУЧНЫЕ ПУБЛИКАЦИИ СОТРУДНИКОВ ВИР В ЖУРНАЛАХ, ИНДЕКСИРУЕМЫХ В БАЗАХ ДАННЫХ «СЕТЬ НАУКИ» (WEB OF SCIENCE) И SCOPUS. 2024 г. (на 18.08.2024)

the Leaves of Three *Medicago varia* Mart. Varieties by Tandem Mass Spectrometry. *Processes*. 2024,12(5),1041. DOI: 10.3390/pr12051041

Razgonova M.P., Cherevach E.I., Kirilenko N.S., Demidova E.N., Golokhvast K.S. Determining the Polyphenol Complex in *Reynoutria japonica* Houtt. by the Tandem Mass Spectrometry Method. *Russian Journal of Plant Physiology*. 2024;71(3):99. DOI: 10.1134/S1021443724606049

Lysenko N.S., Malyshev L.L., Puzansky R.K., Shavarda A.L., Shelenga T.V. Biomarkers for alumotolerance of winter-hardy forms of *Triticum aestivum* L. from the VIR collection. *Sel'skokhozyaistvennaya Biologiya* [*Agricultural Biology*. 2024;59(1):116-130. DOI: 10.15389/agrobiology.2024.1.116eng

Gordeeva E.I., Shamanin V.P., Khlestkina E.K., Shoeva O.Yu. On peculiarities of breeding purple-grained wheat based on varieties with anthocyanin pigmentation of coleoptiles and stems. *Sel'skokhozyaistvennaya Biologiya* [*Agricultural Biology*]. 2024;59(3):507-524. DOI: 10.15389/agrobiology.2024.3.507eng

Gurina A.A., Gancheva M.S., Alpatieva N.V., Rogozina E.V. *In silico* search for and analysis of *R* gene variation in primitive cultivated potato species. *Vavilovskii Zhurnal Genetiki i Selektsii=Vavilov Journal of Genetics and Breeding*. 2024;28(2):175-184. DOI: 10.18699/vjgb-24-21