|  | **2nd International Conference “Genetically modified organisms: The Нistory, Achivements, Social and Environmental Riscs”** |
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**Conference program**

**Программа конференции**

St. Petersburg State University

St. Petersburg, Russia, December 6–8, 2022

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| Национальный проект «Наука и университеты» | ФЕДЕРАЛЬНЫЙ НАУЧНЫЙ ЦЕНТР  ОВОЩЕВОДСТВА | КнАГУ - Десятилетие науки и технологий |

**Program Committee**

**Matveeva T.V.,** Professor of the Department of Genetics and Biotechnology, St. Petersburg State University — Co-Chairman;

**Tikhonovich I.A.,** acting Dean of the Faculty of Biology, St. Petersburg State University - Co-Chairman;

**Diveeva N.I.,** Professor of the Department of Labor and Social Law, St. Petersburg State University;

**Dolgikh E.A.,** Head of the Signal Regulation Laboratory, Federal State Budgetary Scientific Institution **"**All-Russian Research Institute of Agricultural microbiology**"**

**Bruskin S.A.,** Deputy Director of the Institute of General Genetics

**Lutova L.A.,** Professor of the Department of Genetics and Biotechnology, St. Petersburg State University.

**Organising Committee**

**Khudyakova D.V.,** Manager, Events & Partnership Department, St. Petersburg State University

**Matveeva T.V.,** Professor of the Department of Genetics and Biotechnology, St. Petersburg State University

**December 6, Tuesday**

Join the conference via Zoom (the link’s available for 3 days): <https://zoom.us/j/95825073608?pwd=V1dOeUlVVVk4Z0F6U1ltWHAwd3ZkZz09>

**10.00–11.00** Registration

**11.00** Conference opening ceremony. Welcome speech by the Dean of the Faculty of Biology of St. Petersburg State University I.A. Tikhonovich

**11.30–13.30 Section “Genetic engineering. History of research in Russia and abroad»**

| *Chairmen* *Matveeva T.V., Chekunova EM* | |
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| 11.30–12.10  IL1 | **Matveeva T.V.**  *St. Petersburg State University, St. Petersburg, Russia*  **Natural GMOs: a history of research** |
| 12.10–12.50  OL1  E | **Wuyao W.1,** Yuqiao Z 2  *1China University of Political Science and Law, China*  *2Civil, Commercial and Economic Law School, China*  **The Fiscal and Tax Policies on the Development of GMOs for Agriculture and Medicine in China: Retrospect, Status Quo and Prospect** |
| 12.50–13.30  OL2 | **Chekunova E.M.**  *St. Petersburg State University, St. Petersburg, Russia*  **Chloroplast genomes and GMOs. History, features and perspectives on plastid transgenesis in plant biotechnology** |

**13.30–14.30** Lunch

**14:30–16:30 Section “GMOs in basic research”**

| *Chairmen Dolgikh E.A., Lebedeva M.A.* | |
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| 14.30-15.00  IL2 | **Dolgikh E.A., Kantsurova E.S., Dymo A.M.**  *All-Russian Research Institute for Agricultural Microbiology, St. Petersburg, Russia*  **The development of approaches to create new symbiotic systems** |
| 15.00-15.30  IL3  E | **Chen K.**  *Shanghai Chenshan Plant Science Research Center (CAS)*  *Shanghai, China*  **Agrobacterium mediated Natural transgenic plants and their effects on plant growth, development and evolution** |
| 15.30-16.00  OL3 | **Lebedeva M.A.,** Dobychkina D., Lutova LA  *St. Petersburg State University, St. Petersburg, Russia*  **Systemic control of symbiotic nodulation in legume plants: genetic engineering in functional studies of key regulators** |

**16.00–16.15** Coffee break

**16.15–17.00** Poster session

**December 7, Wednesday**

Join the conference via Zoom (the link’s available for 3 days): <https://zoom.us/j/95825073608?pwd=V1dOeUlVVVk4Z0F6U1ltWHAwd3ZkZz09>

**11:00–13:00 Section** **“GMOs in basic research”**

| *Chairmen Rumyantsev A.M., Ilina E.L.* | |
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| 11.00– 11.30  OL4 | **Ilina E.L**., Kiryushkin A.S., Puchkova V.A., Demchenko K.N.  *1Komarov Botanical Institute of the Russian Academy of Sciences. St. Petersburg, Russia,*  **Composite plants of cucumber and buckwheat as a tool to study auxin distribution and transport in the root system** |
| 11.30–12.00  OL5 | **Rumyantsev A.M.** SidorinA.V., IanshinaT.M., PetrovaK.V., Ishtuganova V.V., SambukE.V., PadkinaM.V.  *St. Petersburg State University, St. Petersburg, Russia*  ***Komagataella phaffii* yeast as a model organism in biotechnology and fundamental research** |
| 12.00–12.15  OL6 | **Kuznetsova K.A.,** Dodueva I.E., Lutova L.A.  *St. Petersburg State University, St. Petersburg, Russia*  **Identification of SNPs and InDels probably associated with the development of spontaneous tumors in radish (*Raphanus sativus* L.)** |
| 12.15– 12.30  OL7 | **EfremovaE.P.,** TvorogovaV.E., Lutova L.A.  *St. Petersburg State University, St. Petersburg, Russia*  **The *MtWOX* and *MtCLE* genes in the regulation of *Medicago truncatula* somatic embryogenesis** |
| 12.30– 12.45  OL8 | **Kozlov N.,** Simonova V.Y., Krasnoperova E.Y., Potsenkovskaia E.A., Tvorogova V.E., Lutova L.A**.**  *St. Petersburg State University, St. Petersburg, Russia*  **Development of a transgenic tissue visualization system in representatives of Fabaceae** |
| 12.45– 13.00  OL9  E | **Simonova V.Y.1,** Potsenkovskaia E.A.1, Kozlov N.V.2, Tvorogova V.Y.2, Lutova L.A. 2  *1Sirius University of Science and Technology, Sochi, Russia*  *2St. Petersburg State University, St. Petersburg, Russia*  **Development of a testing system for regeneration regulators in *Pisum sativum*** |

**13:00–14:30** Lunch

**14:30–16:30** **Section** “**GMOs for agriculture and medicine”**

| *Chairmen Rumyantsev A.M., Sopova J.V* | |
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| 14.30–15.00  IL4 | **Leonova E.I.**  *St. Petersburg State University, St. Petersburg, Russia*  **Genetically Altered Mouse Models: which way to choose** |
| 15.00-15.20  OL10 | **Kulichikhin K.Yu.,** Zelinsky A.A., Gorsheneva N.A., Ryabinina M.V., Grizel A.V., Azarov V.V., Rubel A.A.  *St. Petersburg State University, St. Petersburg, Russia*  **The use of genetically modified yeast in human amyloidosis research** |
| 15.20-15.40  OL11 | **MakeevaA.S.,** Shubert M.A., Al Shanaa O.R., RumyantsevA.M.  *St. Petersburg State University, St. Petersburg, Russia*  **Methylotrophic yeast *Komagataella phaffii* as Neoleukin producer** |
| 15.40-16.00  OL12 | **Timonin V.D.,** Burlakovskiy M.S., Padkina M.V., Lutova L.A.  *St. Petersburg State University, St. Petersburg, Russia*  **Transgenic plants-immunomodulators for animal husbandry.** |
| 16.00-16.20  OL 13 | **Kantsurova E.S.,** Dolgikh E.A.  *All-Russian Research Institute for Agricultural Microbiology, St. Petersburg, Russia*  **Features of the regulation of the transcription factor NIN, which determined its participation in the control of nodule organogenesis in legumes plants** |

**16:30–17:00** Coffee break

**17:00–18:00** Poster session

**December 8, Thursday**

Join the conference via Zoom (the link’s available for 3 days): <https://zoom.us/j/95825073608?pwd=V1dOeUlVVVk4Z0F6U1ltWHAwd3ZkZz09>

**11:00–13:00 Section** **“Environmental aspects of transgenic technologies”**

| Chairmen Khafizova G.V., Matveeva T.V. | |
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| 11.00-11.30  IL5  E | **Weisberg A.J.,** Davis II E., Tabima J., Putnam M., Miller M., Belcher M., Grünwald N.1,2, Ream W.3, Lai E.4, Kuo C.4, Loper J.1.2, Chang J.H.1,2 Alexandra Weisberg1, Edward Davis II1, Javier Tabima1, Melodie Putnam1, Marilyn Miller1, Michael Belcher1, Niklaus Grünwald1,2, Walt Ream3, Erh-Min Lai4, Chih-Horng Kuo4, Joyce Loper1,2, Jeff Chang1  *1Department of Botany and Plant Pathology, Oregon State University, Corvallis, OR 97331*  *2Horticultural Crops Research Laboratory, US Department of Agriculture, Agricultural Research Service, Corvallis, OR 97331*  *3Department of Microbiology, Oregon State University, Corvallis, OR 97331*  *4Institute of Plant and Microbial Biology, Academia Sinica, Taipei 11529, Taiwan*  **Evolution and epidemiology of global populations of nursery-associated *Agrobacterium*** |
| 11.30-12.00  OL14 | **Khafizova G.V.,** Matveeva T.V.  *St. Petersburg State University, St. Petersburg, Russia*  **Natural GMOs in the genus *Nicotiana* L** |
| 12.00-12.30  OL15 | **Zhidkin R.1,** Zhurbenko P1,2., Gorodilova E.1, Matveeva T1.  *1St. Petersburg State University, St. Petersburg, Russia*  *2Komarov Botanical Institute of the Russian Academy of Sciences. St. Petersburg, Russia,*  **Molecular genetic and bioinformatic approaches for the allele reconstruction of the rolB/C-like gene in representatives of the genus *Vaccinium*** L |

**12.30–14.00** Lunch

**14.00–16.00 Section “GMO and society”**

| Chairman Matveeva T.V. | |
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| 14.00-14.30  OL16 | Himmel M.1, **Malygina A.A.2,** Dukhinova M.S.3  *1Independent Lecturer in Bioethics and Biosecurity, Hamburg, Germany*  *2St. Petersburg State University, St. Petersburg, Russia*  *3ITMO University, St Petersburg, Russia*  **Biorisk Assessment of Genetic Engineering - Lessons Learned from Teaching Interdisciplinary Courses on Responsible Conduct in the Life Sciences** |
| 14.30-15.00  IL7 | **Diveeva N. I.**  *St. Petersburg State University, St. Petersburg, Russia*  **Legal problems of Risk Assessment in Genetic Engineering Processes in Russia** |
| 15.00-15.30  OL 17 | **Bruskin S.A.**  *Vavilov Institute of General Genetics, Moscow, Russia*  **Legal aspects of new genetic technologies** |
| 15.30–16.00 | Closing of the conference |

**16:00–16:30** Coffee break

**16.45–17.45** Excursion around Twelve Collegia and Dmitry Mendeleev’s Memorial Museum Apartment

**Poster presentations**

| PP1 | **Potsenkovskaya E.A**., Tvorogova V.E., Lutova L.A.  *St. Petersburg State University, St. Petersburg, Russia*  **NF-Y genes in the somatic embryo development** |
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| PP2 | **Krasnoperova E.Yu.,** Tvorogova V.E., Lutova L.A.  *St. Petersburg State University, St. Petersburg, Russia*  **MtWOX2 gene in somatic embryogenesis of *Medicago truncatula*** |
| PP3 | **Gancheva M.1**, Safronova D., Valitova E., Dulesov M., Chebykina A., Solovyov Y., Semenova T., Mamonova X., Volchkov A., Fomina D., Korneva S.,Lutova LA1  *St. Petersburg State University, St. Petersburg, Russia*  **Assembly of genetic constructs for analysis of three promoters in plants** |
| PP4 | Lipatov P. *1*, **Bogomaz F.** *1*, Gosudarev K. *1*, Kondrashova S. *1*, Kuchevsky M. *1*, Malyuga N. *1*, Miagkii E. *1*, Sergeenkova M. *1*, Tverdokhlebova V. *1*, Shtina A 1, Khafizova G.V*. 2*  *1Sirius University of Science and Technology, Sochi, Russia*  2 *St. Petersburg State University, St. Petersburg, Russia*  **New cellular T-DNAs in naturally transgenic plants** |
| PP5 | **Bemova V.D.**1, Matveeva T.V.2  *1Federal Research Center N. I. Vavilov All-Russian Institute of Plant Genetic Resources (VIR), St. Petersburg, Russia,*  *2St. Petersburg State University, Russia*  **Prospects for the use of naturally transgenic cultivated peanut (*Arachis hypogaea* L.) in breeding** |
| PP6 | **Zhurbenko P.M.**1, Klimenko F.N.2  *1Komarov Botanical Institute of the Russian Academy of Sciences. St. Petersburg, Russia,*  *2Federal Scientific Center of Rehabilitation of the Disabled named after G.A. Albrecht of the Ministry of Labour and Social Protection of the Russian Federation*  **PhaseAll: a simple tool for read-based allele phasing** |
| PP7 | **Shaposhnikov A.D**, Matveeva T.V.  *St. Petersburg State University, St. Petersburg, Russia*  **Homologues of octopine/vitopine synthase genes in natural GMOs** |
| PP8 | **Sokornova S.V.** 1, Alekseeva A.N. 1,2, Shaposhnikov A.D. 1, Matveeva T.V. 1  *1Saint Petersburg State University, Saint Petersburg, Russia*  *2Saint Petersburg State University of Industrial Technologies and Design*  **Genetic engineering approaches to study of the opines of natural GMOs** |
| PP9 | **Yu. S. Cheryatova**, E. Yu. Yembaturova  [*Russian State Agrarian University - Moscow Timiryazev Agricultural Academy*](https://www.scopus.com/affil/profile.uri?id=60069979&origin=AuthorResultsList)*, Moscow,*  **Transgenic plants – a threat to local flora?** |
| PP10 | **Virolainen P.A.**1, Chekunova E.M.2  *1Federal Research Center* [*N. I. Vavilov All-Russian Institute of Plant Genetic Resources (VIR)*](http://www.vir.nw.ru/)*, St. Petersburg, Russia,*  *2St. Petersburg State University, St. Petersburg , Russia*  **Optimization of CRISPR/Cas9 method for transgenesis of model microalgae *Chlamydomonas reinhardtii*** |
| PP11 | **Ryabinina M.V.,** Zelinsky A.A., Rubel A.A.  *St. Petersburg State University, St. Petersburg , Russia*  **Application of genetically modified microorganisms for potential human amyloids search** |
| PP12 | **Chirinskaite A.V**., Fotina A.S., Markova E.V., Vishnyakova P.A., Poltavets A.S., Sopova J.V., Leonova E.I.  *St. Petersburg State University, St. Petersburg, Russia*  **Design of COMT-Knockout mouse as a preeclampsia model** |
| PP13 | **Malikova O.A.,** Zobnina A.E., Kachkin D.V., Aksenova A.Y., Chernoff Y.O., Rubel A.A.  *St. Petersburg State University, St. Petersburg, Russia*  **Transgenic yeast model for searching mutations affecting human aβ42 peptide aggregation** |
| PP14 | **Markova E.,** Chirinskaite A., Sopova J., Leonova E.  *St. Petersburg State University, St. Petersburg, Russia*  **The sweet protein brazzein as a promising natural sweetener** |
| PP15 | **Vasyutkina E.1,** Yugay Y.1, Grigorchuk V.1, Grishchenko O.1, Stepochkina V., Shkryl Y1.  *1Federal Scientific Center of the East Asia Terrestrial Biodiversity of the Far East Branch of Russian Academy of Sciences, Vladivostok, Russia*  *2Advanced Engineering School «Institute of Biotechnology, Bioengineering and Food Systems» of the Far Eastern Federal* University, *Vladivostok, Russia*  **Overexpression of the *Ib-rolB/C* gene perturbs biosynthesis of caffeoylquinic acid derivatives in transgenic calli of sweet potato** |
| PP16 | **Degtyarenko A.I.**1 Stepochkina V.2, Shkryl Y.1  *1Federal Scientific Center of the East Asia Terrestrial Biodiversity of the Far East Branch of Russian Academy of Sciences, Vladivostok, Russia*  *2Advanced Engineering School «Institute of Biotechnology, Bioengineering and Food Systems» of the Far Eastern Federal University, Vladivostok, Russia*  **Heterologous expression of β-alanine betaine biosynthesis gene increases Nicotiana tabacum resistance to abiotic stresses** |