

Preliminary Program of the PlantGen 2017
(May 29 – June 2, 2017)

Day 1. May 29, 2017.

Best Western Plus Atakent Park Hotel, 42 Timiryazev street
Congress hall "Atakent"

- 10.00-14.00** *Registration desk opens, poster setup starts, hand in your presentation*
- 14.00-14.15** Greetings from the Ministry of Education and Sciences of the Republic of Kazakhstan
- 14.15-14.25** Greetings from the city administration

Reports on integration of biological and agricultural sciences in Kazakhstan

- 14.30-14.50** **G. Sitpaeva**
GENETIC RESOURCES OF FLORA IN KAZAKHSTAN
Institute of Botany and Phytointroduction, Almaty Kazakhstan
- 14.50-15.10** **M. Yessimbekova**
GENETIC RESOURCES OF CROP SPECIES OF KAZAKHSTAN
Kazakh Research Institute of Agriculture and Plant Production, Almaty region, Kazakhstan
- 15.10-15.30** **A. Abugalieva**
MAIN TRENDS IN CEREAL BREEDING IN KAZAKHSTAN
Kazakh Research Institute of Agriculture and Plant Production, Almaty region, Kazakhstan
- 15.30-15.50** **T. Azhagaliyev**
STATE TRIALS AND REGISTRATION OF CROPS IN KAZAKHSTAN
State Seed Testing Organization, Astana, Kazakhstan
- 15.50-16.10** *Coffee break*
- 16.10-16.30** **K. Zhambakin**
DEVELOPMENT OF PLANT BIOTECHNOLOGY IN KAZAKHSTAN
Institute of Plant Biology and Biotechnology, Almaty, Kazakhstan
- 16.30-16.50** **Y. Turuspekov**
COOPERATIVE PROJECTS OF PLANT GENETICS AND BREEDING IN KAZAKHSTAN
Institute of Plant Biology and Biotechnology, Almaty, Kazakhstan

Reports on integration of science in CIS countries

- 16.50-17.10** **Y. Salina**
COOPERATIVE PROJECTS FOR BREEDING AND GENETICS IN CIS COUNTRIES
Institute of Cytology and Genetics, Novosibirsk, Russia
- 17.10-17.30** **I. Voinikov**
ENERGETIC AND INFORMATION SYSTEMS OF PLANT CELLS UNDER TEMPERATURE CHANGES
Siberian Institute of Plant Physiology and Biochemistry, Irkutsk, Russia
- 18.00-21.00** **Welcome Reception** (*folk music performance shouldn't be missed*)

May 30, 2017. Plenary Session

Session 1. Genetic resources and evolution

8.50-9.00 Session opening

9.00-9.30 **N. Goncharov** (Institute of Cytology and Genetics, Novosibirsk, Russia).

“Taxonomy and molecular phylogeny of genus *Triticum* L.”

9.35-10.05 **F. Blattner** (IPK, Gatersleben, Germany)

“The evolution of the wheat grasses: Coenogenome vs. taxonomic diversification”

10.10-10.40. **T. Tanaka** (National Institute of Crop Science, Tsukuba, Japan)

“Barley genetic resources and development of genotyping infrastructure”

10.45-11.00 Coffee break

Session 2. Genetics of Resistance to Stresses and Grain Quality

11.00-11.30 **S. Griffiths** (John Innes Centre, Norwich, UK)

“Global journeys of adaptive wheat genes ”

11.35-12.05 **Y. Uga** (National Institute of Crop Science, Tsukuba, Japan)

“Genomics-based breeding using genetic variation of root system architecture improves crop productivity under abiotic stress conditions ”

12.10-12.40 **T. Fahima** (University of Haifa, Haifa, Israel)

“Diversity and evolution of disease resistance genes derived from wild emmer wheat”

13.00-14.00 Lunch

Session 3. Genomics, Phenomics and Bioinformatics.

14.00-14.30 **Q. Zhang** (Huazhong Agricultural University, Wuhan, China).

“Green goals and green technologies in plant breeding for global food security: the rice model”

14.35-15.05 **M. Ganai** (TraitGenetics GmbH, Germany)

“High throughput genotyping for plant research and breeding”

15.10-15.40 **M. Chen** (Zhejiang University, Hangzhou, China)

«Integrative bioinformatics approaches for cellular interactome modelling of rice».

15.45-16.00 Coffee break

Session 4. Genetic Engineering and Crop Improvement.

16.00-16.30 **J. Kumlehn** (IPK, Gatersleben, Germany).

“Genome engineering in cereals ”

16.35-17.05 **T. Komatsuda** (National Institute of Crop Science, Tsukuba, Japan)

“The potential of barley/wheat orthology to advance cereal grain yield”

17.10-17.40 **B. Wulff** (John Innes Centre, Norwich, UK)

“Rapid gene cloning in wheat ”

17.45-18.00 Closing the plenary session.

May 31, 2017. Tour to Medeo, Chimbulak, and center of Almaty.

9.00 Departure from the Hotel

June 1, 2017. Parallel sessions 1 and 2.

Session 1. Genetic resources and evolution

Sub-session 1.1 Preservation and study of genetic resources of agricultural crops.

Moderators – N. Goncharov and A. Börner

9.00-9.25 **Keynote A. Börner** (IPK, Gatersleben, Germany) «Genetic resources for food and agriculture – conservation and utilization». Co-authors: Börner A., Nagel M, Agacka-Mołodoch M., Börner M., Lohwasser U., Riewe D., Wiebach J., Altmann T., Pshenichnikova T.A., Khlestkina E.

9.30-9.50 **R. Sadoyan** (Armenian State Pedagogical University, Yerevan, Armenia) “The genetic potential of South Caucasus wheat”.

9.55-10.15 **G. Chen** (Northwest Institute of Eco-Environment and Resources, Lanzhou, China) «A potential food crop *Agriophyllum squarrosum*». Co-authors: G. Chen, J. Zhao, X. Zhao, P. Zhao, J. Zhang.

10.20-10.35 **T. Akar** (Турция) «Molecular and Agro-Morphologic Characterization of Einkorn (*T. monococcum*) and Emmer (*T. dicoccon*) Hulled Wheat Landraces». Co-authors: K. Gurcan, F. Demirel, M. Tekin, T. Akar.

10.40-11.00 Coffee break

11.00-11.20 **D. Loginova** (The Institute of Cytology and Genetics, Novosibirsk, Russia) «Rye chromatin introgression into wheat genome: contribution of wheat-rye chromosome substitutions 1R/1A and 6R/6A in hybrid genome stabilization». Co-authors: Silkov O., Loginova D., Ivanova Yu., Krivosheina E., Bondarevich E., Solovey L., Sycheva E., Dubovets N.

11.25-11.45 **C. Toker** (Akdeniz University, Antalya, Turkey) «Transgressions in Reciprocal Interspecific Crosses between the Cultivated Pea and its Wild Species». Co-authors: Dogdu V., Canci H., Sari H., Sari D., Adak A., Toker C.

11.50-12.05 **A. Hassanzadeh Ghorttapeh** (Agricultural and Natural Resources Research and Education, Center of West Azerbaijan, Iran) «Geographical variation and evaluation of Iranian landraces of *Ricinus communis* L.». Co-authors: A.Hassanzadeh Ghorttapeh, M. Abasali, F. Ghanavati, N. Allahyari, G.R. Khakizad, A. Mirakhorli, R.A. Alitabar, A. Taheripor, R. Kanani, M.R. Kyani, H.R.Fanaei, S. Habibifar, H. Ghojig, A. Nakhaei, M.J.Karami, G.R.Abadoz, K.Abbasi, A. Hamzehnegad, S. Safari, SH Asgari, H.Azizi, H. Manochehri, A. Fathi, M. Asadi-Pour, A. Soltani, A.H. Asgari, N. Kazerani, N. Foromadi, M. Samani.

12.05-12.25 **M. Tekin** (Department of Field Crops, Faculty of Agriculture, Akdeniz University Antalya, Turkey) «Variation for Micronutrient and Vitamin B Contents of Turkish Einkorn and Emmer Wheat Candidate Lines».

12.30-12.50 **H. Flachowsky** (Julius Kühn-Institut, Federal Research Center for Cultivated Plants, Institute for Breeding Research on Fruit Crops, Dresden, Germany) «Current state of cisgenesis and rapid crop cycle breeding in German fruit breeding research». Co-authors: Flachowsky H., Hanke M.-V.

13.00-14.00 Lunch

Sub-session 1.2 Molecular systematics and variation in wild plants

Moderators – F. Blattner and S. Abugalieva

14.00-14.25 **F. Blattner** (IPK, Gatersleben, Germany) "Introduction and application of DNA barcoding".

14.30-14.45 **S. Abugalieva** (Institute of Plant Biology and Biotechnology, Almaty, Kazakhstan) «Genetic diversity of endemic and rare wild plant species in Kazakhstan».

14.50-15.05 **Y. Genievskaya** (BSc, Kazakh State University by al-Farabi, Almaty, Kazakhstan) «DNA barcoding of sand rice *Agriophyllum squarrosum* collected in Kazakhstan».

- 15.10-15.25 **Y. Boikaya** (Zaporizhzhia National University, Zaporozhie, Ukraine) «Plant development type and its correlation with other traits in LUNARIA genus (CRUCIFERAE)».
- 15.30-15.45 **S. Almerekova** (PhD student, Kazakh State University by al-Farabi, Almaty, Kazakhstan) «Phylogenetic analysis of endemic species *Oxytropis almaatensis* Bajt. From Kazakhstan».
- 15.50-16.05 **A. Myrzagaliyeva** (East Kazakh University, Ust-Kamenogorsk, Kazakhstan) «Genetic resources of flora in Eastern Kazakhstan».

16.10-16.30 Coffee break

- 16.30-16.45 **A. Imanbayaeva** (Mangyshlak experimental botanical garden, Aktau, Kazakhstan) «Conservation of genetic resources in Western Kazakhstan». Co-authors: A. Imanbaeva, N. Duysenova, A. Tujakova, D. Jumakhan
- 16.50-17.05 **A. Kakimzhanova** (National Biotechnology Center, Astana, Kazakhstan) «Reproduction of plant material of tree species».
- 17.10-17.25 **E. Shadenova** (Institute of Genetics and Cytology, Almaty, Kazakhstan) «Reproduction of genetic resources of Kazakhstan». Co-authors: Shadenova E., Zhumabekov E., Sembekov M.

17.30-18.30 POSTER SESSION

Session 2. Abiotic and Biotic Stress Resistance

Moderators – E. Salina and P. Kostylev

- 9.00-9.25 **Keynote E. Salina** (Institute of Cytology and Genetics, Novosibirsk, Russia) «Approaches and achievements in molecular pre-breeding for rust resistance in West Siberia». Co-authors: Salina E., Adonina I., Stasyuk A., Leonova I.
- 9.30-9.50 **P. Kostylev** (All-Russian Research Institute of Grain Crops by I.G.Kalinenko, Zernograd, Russia) «Marker assisted selection of rice for resistance to diseases, flooding and soil salinity». Co-authors: Kostylev P., Krasnova E., Redkin A., Kalievskaya Y.
- 9.55-10.15 **N. Bome** (Federal State Autonomous Educational Institution of Higher Education, Tyumen State University, Tyumen, Russia) «The variability of the parameters of the morphogenetic processes in populations of *Triticum aestivum* L. under the influence of stress factors». Co-authors: Bome N., Bome A., Weisfeld L., Kolokolova N., Petrova A., Belozerovala A.
- 10.20-10.35 **A. Kokhmetova** (Institute of Plant Biology and Biotechnology, Almaty, Kazakhstan) «Screening of wheat cultivars growing in Kazakhstan and Russia for resistance to *Pyrenophora tritici-repentis* using laboratory and molecular methods».

10.40-11.00 Coffee break

- 11.00-11.20 **Y. Turuspekov** (Institute of Plant Biology and Biotechnology, Almaty, Kazakhstan) «Prediction of flowering time and GWAS of yield components of spring wheat in Kazakhstan». Co-authors: Turuspekov Y., Yermekbayev K., Baibulatova A., Chapman S., Zheng B., Ganai M., Plieske J., Griffiths S., Abugaliev S.
- 11.25-11.40 **I. Leonova** (Institute of Cytology and Genetics, Novosibirsk, Russia) «Resistance to fungal diseases of spring wheat varieties from different Russian regions». Co-authors: Leonova I., Skolotneva E., Salina E.
- 11.45-12.00 **T. Suzuki** (Agricultural Research Department, Hokkaido Research Organization, Hokkaido, Japan) «Resistance to wheat yellow mosaic virus in Madsen wheat is controlled by two major complementary QTLs».
- 12.05-12.20 **A. Zatybekov** (PhD student, Institute of Plant Biology and Biotechnology, Almaty, Kazakhstan) «Association mapping of agronomic traits in soybean harvested in Kazakhstan».
- 12.25-12.40 **L. Minasbekyan** (Yerevan State University, Yerevan, Armenia) «Influence of abiotic factor on different levels of biological system».

12.45-13.00 **A. Perfilva** (Siberian Institute of Plant Physiology and Biochemistry, Irkutsk, Russia) «Expression of stress response genes of *in vitro* potato plants under heat stress and pathogenesis of ring rot». Co-authors: A. Perfilva, E. Garnik, A. Stolbikov, V. Nurminsky.

13.00-14.00 Lunch

Moderators – Y. Uga and E. Potokina

14.00-14.25 **Keynote E. Potokina** (N.I.Vavilov Institute of Plant Genetic Resources, Saint Petersburg, Russia) «Mapping and re-sequencing of *sdw1/denso* locus affecting plant height and heading date in barley». Co-authors: Potokina E., Lebedeva M., Teplyakova S., Ivanova N., Voytsutskaya N., Kovaleva O.

14.30-14.45 **E. Rogozhin** (Shemyakin and Ovchinnikov Institute of Bioorganic Chemistry, Moscow, Russia) «Unique gene structures encoding a family of hairpin-like defense peptides from barnyard grass (*Echinochloa crusgalli* L. Beauv.) seeds». Co-authors: Rogozhin E., Ryazantsev D.

14.50-15.05 **M. Bakir** (Erciyes University, Department of Agricultural Biotechnology, Kayseri, Turkey) «Determination of Ascorbate Peroxidase Gene Expression in the Lentil (*Lens culinaris* Medik) under Drought Stress Conditions». Co-authors: M. Özdere, M. Bakir

15.10-15.25 **A. Gapeka** (Institute of Biology and Soil Science of Far Eastern Branch of Russian Academy of Sciences, Vladivostok, Russia) «Ecology and economic impact of barley stripe mosaic virus (*Virgaviridae*, *Hordeivirus*) in the Primorsky krai of Russia». Co-authors: Gapeka A., Zelikova A., Zhmurkina S., Pleshakova T., Volkov Y., Kakareka N., Shchelkanov M.

15.30-15.45 **L. Elkonin** (Agricultural Research Institute of South-East Region, Saratov, Russia) «Drought as a modulator of gene expression for CMS and apomixis in sorghum». Co-authors: Elkonin L., Kozhemyakin V., Gerashchenkov G., Belyaeva E., Panin V., Rozhnova N.

15.50-16.05 **L. Tohetova** (Kazakh Research Institute of Rice Growing by I. Zhahaev, Kyzylorda, Kazakhstan) «Genetic-statistical analysis the agronomic traits of barley by two-testing method». Co-authors: L.Tohetova, A. Demesinova, M. Bekova.

16.10-16.30 Coffee break

16.30-16.45 **O. Tsivileva** (Institute of Biochemistry and Physiology of Plants and Microorganisms, Saratov, Russia) «Evaluation of opportunity for applying the biogenic metals aspartates to improve the processes of mushrooms cultivation». Co-authors: O. Tsivileva, V.Fadeev, S. Voronin, A. Gumenyuk, V. Nikitina

16.50-17.05 **A. Rsaliyev** (Research Institute for Biological Safety Problems, Dzhambul region, Kazakhstan) «Screening of barley genotype for detection of resistance donors to barley powdery mildew». Co-authors: Rsaliyev A., Pakhratdinova Z.

17.10-17.25 **B. Anapiyaev** (Institute of Engineering High Technologies, Almaty, Kazakhstan) «Molecular markers and haploid biotechnology in rapid selection of *Triticum aestivum* L. for resistance to rust diseases in the conditions of Southern Kazakhstan». Co-authors: Anapiyayev B., Iskakova K., Beisenbek E., Sarbayev A., Dweikat I., Baenziger P.

17.30-18.30 POSTER SESSION

June 2, 2017. Parallel sessions 3 and 4

Session 3. Genomics, Phenomics, and Bioinformatics

Moderators – R. Kalendar and E. Khlestkina

9.00-9.25 **Keynote E. Khlestkina** (Institute of Cytology and Genetics, Novosibirsk, Russia) «Genetics and omics approaches to better understanding regulation of metabolic pathways underlying pigmentation in wheat and barley». Co-authors: Shoeva O., Gordeeva E., Shmakov N., Strygina K., Glagoleva A., Kukoeva T., Shatskaya N., Vasiljev G., Börner A., Afonnikov D., Khlestkina E.

9.30-9.45 **J. Jianbo** (BGI Genomics Co., Ltd, Shenzhen, China) «The application of genomic innovation in plant».

9.50-10.05 **O. Dobrovolskaya** (Institute of Cytology and Genetics SB RAS, Novosibirsk, Russia) «Study on genetic control of early inflorescence development in bread wheat (*T. aestivum* L.) that determines inflorescence architecture and yield». Co-authors: Dobrovolskaya O., Popova K., Orlov Y., Krasnikov A., Martinek P.

10.10-10.25 **P. Ulianich** (N. I. Vavilov Institute of Plant Genetic Resources, Saint Petersburg, Russia) «Genotyping of population generated by *Populus tremula* × *P. alba* cross». Co-authors: Lebedeva M., Zhigunov A., Ulianich P., Voitsekhovskii D., Potokina E.

10.30-10.50 Coffee break

10.50-11.10 **Keynote R. Kalendar** (National Biotechnology Center, Astana, Kazakhstan) «Genome size variation and long tandem arrays of LTR retroelements in plants».

11.15-11.35 **A. Glagoleva** (Institute of Cytology and Genetics SB RAS, Novosibirsk, Russia) «Identification of genes controlling black pigmentation in cereals». Co-authors: Glagoleva A., Vasiliev G., Shatskaya N., Shmakov N., Afonnikov D., Shoeva O., Börner A., Khlestkina E.

11.40-11.55 **O. Babak** (Institute of Genetics and Cytology, Minsk, Belarus) «Peculiarities of lycopene β-cyclase genes expression, depending on the combinations of alleles that determine the accumulation of pigments in the *Solanaceae*». Co-authors: Babak O., Nekrashevich N., Nikitinskaya T., Yatsevich K., Kilchevsky A.

12.00-12.15 **A. Kiseleva** (PhD student, Institute of Cytology and Genetics SB RAS, Novosibirsk, Russia) «New aspects of wheat photoperiod insensitive *Ppd-B1* regulation and interactions». Co-authors: Kiseleva A., Salina E.

12.20-12.35 **K. Yermekbayev** (PhD student, Institute of Plant Biology and Biotechnology, Almaty, Kazakhstan) «Construction and utilization of the hexaploid wheat genetic map Pamyati Azieva x Paragon» Co-authors: Yermekbayev K., Turuspekov Y., Ganai M., Plieske J., Griffiths S.

12.40-12.55 **U. Kairov** (Nazarbaev University, Astana, Kazakhstan) «Transcriptome sequencing and gene expression profiling of wheat cell culture during transition to somatic embryogenesis». Co-authors: N.K. Bishimbayeva, U. Kairov, C.Y. Li, N.O. Nakisbekov, A.N. Begzat, A. Molkenov, A.S. Amirbekov, A.O. Smagul, T. Kapasuly, A. Mitra, I.R. Rakhimbayev

13.00-14.00 Lunch

Moderators – M. Ganai and M. Abbasov

14.00-14.20 **Keynote Y. Orlov** (Institute of Cytology and Genetics SB RAS, Novosibirsk, Russia) «Bioinformatics analysis of genome and transcriptome structures related to freezing and drought resistance in crop plants». Co-authors: Orlov Y., Dobrovolskaya O., Bragin A., Babenko V., Chen M.

14.25-14.45 **M. Abbasov** (Genetic Resources Institute of ANAS, Baku, Azerbaijan) «Evaluating genetic diversity of durum and bread wheat genotypes using next generation sequencing». Co-authors: M. Abbasov, Z. Akparov, N. Aminov, K. Rustamov, F. Sheykhzamanova, S. Rzayeva, R. Bowden, J. Raupp, S. Sehgal, B. Gill.

14.50-15.10 **N. Shmakov** (Institute of Cytology and Genetics SB RAS, Novosibirsk, Russia) «Investigating barley nuclear genes controlling chlorophyll synthesis with RNA-seq». Co-authors: N. Shmakov, G. Vasiliev, N. Shatskaya, A. Doroshkov, D. Afonnikov, E. Khlestkina.

15.15-15.35 **V. Khlestkin** (Institute of Cytology and Genetics SB RAS, Novosibirsk, Russia) «High-throughput microscopy-based phenotyping of potato starch granules».

15.40-15.55 **M. Genaev** (Institute of Cytology and Genetics SB RAS, Novosibirsk, Russia) «Mobile application for high throughput grain phenotyping». Co-authors: M. Genaev, E. Komyshev, D. Afonnikov

16.00-16.15 Coffee break

16.15-16.35 **E. Evtushenko** (Institute of Molecular and cellular Biology, SB RAS, Novosibirsk, Russia) «Cytogenomic problems of heteroplasmatic hexaploid triticale».

16.40-16.55 **K. Strygina** (Institute of Cytology and Genetics SB RAS, Novosibirsk, Russia) «Duplicated genes in polyploid plant species - case studies in wheat and potato». Co-authors: Strygina K., Shoeva O., Gordeeva E., Khlestkina E.

17.00-17.15 **P. Natalin** (Thermo Fisher Scientific) «Affymetrix solutions for plant genetics research».

17.20-17.35 **A. Vitovtov** (Thermo Fisher Scientific) «New approaches in plant cell analysis: robust monitoring of cell health and physiology».

17.40-17.55 **K. Bolaeyva** (SkyGen Ltd., Russia) «SkyGen solutions for DNA sequencing, cloning and genome editing».

18.00. Conference Closure

Session 4. Genetic Engineering and Crop Improvement.

Moderators – S. Toki and J. Kumlehn

9.00-9.25 **Keynote S. Toki** (NARO Institute of Agrobiological Sciences, Tsukuba, Japan) «Precise and efficient Mutagenesis in Crops via Genome editing».

9.30-9.45 **V. Pavlichenko** (Siberian Institute of Plant Physiology and Biochemistry, Irkutsk, Russia) «Agrobacterium mediated transformation of *Populus×beroliensis* by *AtGA20ox1* gene using pRI 101-AN vector». Co-authors: Pavlichenko V., Bairamova E., Protopopova M., Zolotovskaya E., Voinikov V.

9.50-10.05 **P. Khvatkov** (All-Russia Research Institute of Agricultural Biotechnology, Moscow, Russia) «Agrobacterium-mediated transformation of *Wolffia arrhiza*, to obtain plant-producer of recombinant human granulocyte colony-stimulating factor». Co-authors: Khvatkov P., Firsov A., Shaloiko L., Pushin A., Tarasenko I., Chernobrovkina M., Dolgov S.

10.10-10.25 **B. Rezaeva** (PhD student, Center of Genomics and Bioinformatics, Tashkent, Uzbekistan) «Effective Agrobacterium transformation of wheat *Triticum aestivum* L.». Co-authors: Rezaeva B., Buriev Z., Ubaydullaeva K., Rakhmanov B., Tulanov A., Abdurakhmonov I.

10.30-10.50 Coffee break

10.50-11.10 **L. Pershina** (Institute of Cytology and Genetics SB RAS, Novosibirsk, Russia) «Alloplasmic wheat to genetic research and breeding». Co-authors: Pershina L., Belan I., Rosseeva L., Osadchaya T., Kravtsova L., Belova L., Trubacheeva N.

11.15-11.35 **S. Gerasimova** (Institute of Cytology and Genetics SB RAS, Novosibirsk, Russia) «Genome editing in Siberian barley». Co-authors: Gerasimova S., Korotkova A., Khlestkina E.

11.40-11.55 **I. Graskova** (Siberian Institute of Plant Physiology and Biochemistry, Irkutsk, Russia) «The possibility of using of nanocomposites in agriculture».

12.00-12.15 **M. Ilyushko** (Primorsky Scientific Research Institute of Agriculture, Ussuriisk, Russia) «Nuclear DNA content in rice regenerants, obtained by anther culture *in vitro* in Russian Far East». Co-authors: Ilyushko M., Skaptsov M., Romashova M.

12.20-12.35 **V. Stegnyy** (National Research Tomsk State University, Tomsk, Russia) «Genetic parameters of species required for effective selection». Co-authors: V. Stegnyy, A. Sibataev, G. Abylkassymova.

12.40-12.55 **S. Manabayeva** (National Center for Biotechnology, Astana, Kazakhstan) «Tomato bushy stunt virus - based vector for transient expression of heterologous proteins in *Nicotiana benthamiana* plants». Co-authors: Manabayeva S., Zhumabek A., Abeuova L., Ramankulov E.

13.00-14.00 Lunch

Moderators – I. Graskova and G. Shpakovski

14.00-14.20 **Keynote G. Shpakovski** (Shemyakin-Ovchinnikov Institute of Bioorganic Chemistry, Moscow, Russia) «A key enzyme of animal steroidogenesis can function in plant improving their immunity and increasing the processes of growth and development». Co-

authors: Shpakovski G., Spivak S., Berdichevets I., Babak O., Kilchevsky A., Shpakovski D., Khaliluev M., Shematorova E.

14.25-14.40 **K. Korolev** (Tyumen State University, Tyumen, Russia) «Mutational variability of the varieties of flax (*Linum usitatissimum* L) induced by nitrosomethylurea and nitrosoguanidine». Co-authors: Korolev K., Golub I.

14.45-15.00 **E. Tvorogova** (Saint Petersburg State University, Saint Petersburg, Russia) «New participants of somatic embryogenesis in *Medicago truncatula*». Co-authors: Tvorogova V., Fedorova Y., Vaschkevich T., Lutova L.

15.05-15.20 **T. Pleshakova** (Federal Scientific Center of the East Asia Terrestrial Biodiversity, Vladivostok, Russia) «Plant viruses and their interaction with plant communities of Far East of Russia». Co-authors: Pleshakova T., Kozlovskaya Z., Tolkach V., Volkov Y., Kakareka N., Gapeka A., Shchelkanov M.

15.25-15.40 **Z. Vershinina** (Institute of Biochemistry and Genetics of Ufa Science Centre, Ufa, Russia) «Agglutinin genes and the process of creating artificial symbiotic systems». Co-authors: Vershinina Z., Hakimova L., Yasybaeva G., Lavina A., Baimiev A.

15.45-16.00 **Y. Fedorova** (BSc, St. Petersburg State University, Saint Petersburg, Russia) «Regulation of somatic embryogenesis by WOX genes in *Medicago truncatula*». Co-authors: Fedorova Y., Tvorogova V., Lutova L.

16.00-16.15 Coffee break

Подсекция 4.2. Modern biotechnology approaches in study of wild and cultivated oats

Moderators – T. Langdon and I. Loskutov

16.15-16.35 **Keynote T. Langdon** (Aberystwyth University, UK) «Genomics tools for oat breeding». Co-authors: Bisaga M., Griffiths I., Vickerstaff R., Paczos-Grzeda E., Abugalieva A., Dumlupinar Z., Huang Y-F., Giorgi D., Lucretti S., Langdon T.

16.40-16.55 **Z. Zhang** (Institute of Crop Science, Beijing, China) «Preservation and evaluation of genetic resources of oat in China».

17.00-17.15 **I. Loskutov** (N. I. Vavilov Institute of Plant Genetic Resources, Saint Petersburg, Russia) «Metabolomic approach to resistance of *Avena* species to Fusarium head blight (FHB)».

17.20-17.35 **A. Abugalieva** (Kazakh Research Institute of Agriculture, Almaty region, Kazakhstan; Kazakh National Agrarian University, Kazakhstan) «Grain quality in collections of wheat and oat».

17.40-17.55 **P. Ulianich** (N. I. Vavilov Institute of Plant Genetic Resources, Saint Petersburg, Russia) «Mapping of photoperiod response loci in the RILs population of hexaploid oat». Co-authors: Ulianich P., Grigoreva E., Koshkin V., Loskutov I., Potokina E.

18.00. Conference Closure

18.30-22.00 Conference Banquet

PlantGen 2017 (Almaty, Kazakhstan, 2017) - POSTER SESSIONS

Session 1. Genetic Resources and Evolution

- P1-1** Abugalieva S.¹, **Amalova A.**¹, Anuarbek S.¹, Kaparbay R.¹, Ivaschenko A.², Turuspekov Y.¹
¹ *Institute of Plant Biology and Biotechnology, Almaty, Kazakhstan*
² *Ile-Alatau National Nature Reserve, Almaty region, Kazakhstan*
EVALUATION OF GENETIC VARIATION IN RARE TULIP SPECIES FROM KAZAKHSTAN
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- P3-4** Dobrovolskaya O.B.^{1,2}, Morozova K.^{1,2}, **Popova K.I.**¹, Dresvyannikova A.E.², Börner A.³, Röder M.S.³, Kiseleva E.B.¹, Voylovkov A.V.⁴

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- P3-5** N.K. Bishimbayeva, M. Tastan, A. Murtazina, M. Rakhmedova, **Z. Dossova**, M. Yugai, M. Baimenov, S.D. Demesinova

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- P3-6** **Raizer O.B.**, Khapilina O.N., Novakovskaya A.P., Amenov A.A., Danyarov A.Z., Turzhanova A.S., Kalendar R.N.

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- P3-7** **Savin T.V.**², Abugalieva A.I.^{1,2}, Cakmak I.³

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- P4-2** **Amenov A.A.**, Kalendar R.N.

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