



VII BALTIC GENETICS CONGRESS
Riga, Latvia, October 24 - 27, 2018

PROGRAMME

(Status on 22.10.2018, 16:20)

Building of Natural Sciences, University of Latvia
Rīga, Jelgavas iela 1

24 October 2018

12.00-20.00 Registration Lobby
18.00-20.00 Welcome party Auditorium 107

25 October 2018

08.00-09.00 Registration Lobby
09.00-09.30 Opening Auditorium 106, Magnum

Plenary session 1

Chairmen Richard Villems and Jānis Kloviņš

09.30-10.00 **Where are all the young men (and girls) came (from), long time passing?**
Richard Villems (Estonia)

10.00-10.30 **Combining the cohort based biobank and health care system resources for effective study of pharmacogenomics of type 2 diabetes**
Jānis Kloviņš (Latvia)

10.30-11.00 *Coffee break (Room 702)*

Plenary session 2

Chairmen Ain Heinaru and Fatma Silan

11.00-11.30 **Deciphering the genetic architecture of intellectual disability and congenital anomalies by the use of microarray, next generation sequencing methods and functional genomics analysis**
Eglė Preikšaitienė (Lithuania)

11.30-12.00 **Cytogenetics and molecular genetics diagnostic testing and the future of clinical genomics: Experience from Medical Genetic Diagnostic Center in Canakkale, Turkey**
Fatma Silan (Turkey)

12.00-12.30 **Genetics and molecular biology in Estonia: comparison with other countries**
Ain Heinaru (Estonia)

12.30-13.30 *Lunch*

Section 1

Auditorium 223

Chairmen Dalius Butkauskas and Indriķis Krams

13.30-13.50 **Genome database of Latvian population – national biobank for genetic studies**
Rovite V., Fridmanis D., Klovins J. (Latvia)

13.50-14.10 ***Deschampsia antarctica* E. Desv. as a model for studying the microevolutionary processes in marginal populations**
Daria Navrotska, Igor Andreev, Viktor Kunakh (Ukraine)

14.10-14.30 **Linking organismal growth, coping styles, stress reactivity, and metabolism via responses against a selective serotonin reuptake inhibitor in an insect selected for developmental speed**
Indrikis Krams, Giedrius Trakimas, Ronalds Krams, Tatjana Krama (Latvia, Estonia, Lithuania)

14.30-14.50 **Restoration of Baltic Sturgeon population in Lithuania and its characterisation using DNA markers**
Dalius Butkauskas, Andrej Pilinkovskij (Lithuania)

14.50-15.10 **Phylogenetic study of the fire-bellied toad (*Bombina bombina*) population on northern border of areal (Latvia)**
Natalija Skute, Baiba Krivmane, Dmitry Uzameckis, Aija Pupina, Mihails Pupins (Latvia)

15.10-15.40 *Coffee break (Room 702)*

15.40-16.00 **Genetic characterization of *Bartonella* spp. from rodents**
Jana Radzijeuskaja, Dalytė Mardosaitė-Busaitienė, Paulina Amšiejutė, Linas Balčiauskas, Algimantas Paulauskas (Lithuania)

16.00-16.20 **Molecular investigations on *Sarcocystis* parasites in the Baltic States**
Petras Prakas, Viktorija Kirillova, Eglė Rudaitytė-Lukošienė, Inese Gavarāne, Evelina Juozaitytė-Ngugu, Evita Grāvele, Muza Kirjušina, Dalius Butkauskas (Lithuania, Latvia)

16.20-16.40 **Leaf growth response to environmental restrictions: how to distinguish the performance of various perennial ryegrass genotypes?**
Kristina Jaškūnė, Steven Yates, Frank Liebisch, Norbert Kirchgessner, Achim Walter, Gintaras Brazauskas, Bruno Studer (Lithuania, Switzerland)

16.40-18.00 *Poster session*

26 October 2018

Section 2

Auditorium 223

Chairmen Igor Loskutov and Dainis Edgars Ruņģis

- 09.00-09.20 **Metabolomics of *Avena L.* species as a resource for new directions in plant breeding**
Igor Loskutov (Russia)
- 09.20-09.40 **Evaluation of gene networks formed by presence of similar transposable elements in gene flanking regions and introns**
Angelika Voronova, Martha Rendon, Par Ingvarsson, Dainis Ruņģis (Latvia, Sweden)
- 09.40-10.00 **Marker assisted identification of the sources of PVY- resistance genes in the initial material originated from interspecific potato hybrids**
Elena Voronkova, Nicolaj Rusetsky, Viktorija Luksha, Olga Gukasian, Viktor Zharych, Yulija Poliukhovich, Alexander Yermishin (Belarus)
- 10.00-10.20 **SSR markers for cpDNA on exploring germplasm diversity to understand the gene flow process in red clover**
Giedrius Petrauskas, Gražina Statkevičiūtė, Kristina Jaškūnė, Gintaras Brazauskas(Lithuania)
- 10.20-10.40 **Genetic resources of Jerusalem artichoke (*Helianthus tuberosus*) in VIR collection**
Tamara Smekalova, Natalia Lebedeva, Ljubov Novikova (Russia)
- 10.40-11.00 *Coffee break (Room 702)*

Section 3

Auditorium 223

Chairmen Sigutė Kuusienė and Dace Grauda

- 11.00-11.20 **Variation in DNA polymorphism of hybrid aspen F2 progeny *in vitro* system**
Sigutė Kuusienė, Elena Gotoveckienė, Rita Verbylaitė (Lithuania)
- 11.20-11.40 **Induction of polyploidy in giant miscanthus (*Miscanthus × giganteus*)**
O.V. Melnychuk, S.P. Ozheredov, D.B. Rakhmetov, O.O. Shysha, S.O. Rakhmetova, A.I. Yemets, Y.B. Blume (Ukraine)
- 11.40-12.00 **Effect of ploidy level on drought stress response in annual ryegrass**
Olakunle Kelvin Akinroluyo, Vilma Kemešytė, Gražina Statkevičiūtė (Lithuania)
- 12.00-12.20 **Genetic and agronomic analysis of Latvian fescue (*Festuca* spp.), ryegrass (*Lolium* spp.) accessions and their hybrids**
Pēteris Bērziņš, Dainis Edgars Ruņģis, Sarmīte Rancāne, Vija Stesele, Ivo Vēzis, Aldis Jansons (Latvia)
- 12.20-12.40 **Allelic variation at HMW-GS Loci (*Glu-1*) and baking quality-related characteristics of Estonian spring wheat cultivars and breeding lines**
Marina Tikhonova (Estonia)

12.40-13.00 **Impact of ecological factors on development of *Linum usitatissimum***
*Inga Stafecka, Dace Grauda, Sofija Jankauskiene,
Veneranda Stramkale (Latvia, Lithuania)*

13.00-14.00 *Lunch*

Plenary session 3

Auditorium 223

Chairmen Viktor Korzun and Nils Rostoks

14.00-14.30 **Modern possibilities of genetics and genomics in cereal breeding**
Viktor Korzun (Germany)

14.30-15.00 **Genomic and genetic studies of Latvian forest species**
Dainis Edgars Ruņģis (Latvia)

15.00-15.30 **Marker assisted parental line breeding of potatoes at the diploid level**
Alexander Yermishin (Belarus)

15.30-16.00 *Coffee break (Room 702)*

Plenary session 4

Auditorium 223

Chairmen Algimantas Paulauskas and George V. Shpakovski

16.00-16.30 **The second system of steroid hormonal regulation in higher plants:
progesterone as a very ancient bioregulator of plant cells**
George V. Shpakovski (Russia)

16.30-17.00 **Investigation of parasite genetics in Baltic countries**
Algimantas Paulauskas, Dalius Butkauskas (Lithuania)

17.00-17.15 *Closing of the Congress*

18.30 *Social event (Restaurant "Kliversala")*

27 October 2018

Scientific excursions
Departure

List of poster presentations

Molecular detection and characterization of vector-borne pathogens in small rodents

*Paulina Amšiejūtė, Jana Radzijeuskaja, Dalytė Mardosaitė-Busaitienė,
Algimantas Paulauskas (Lithuania)*

Response of juveniles of different forest tree species and populations to the complex of simulated climate change-related stressors: spring-frost, heat, drought, increased UV radiation and ozone concentrations under elevated CO₂ level

*G. Bajerkevičienė, A. Pliūra, J. Jankauskienė, V. Lygis, V. Suchockas, J. Labokas,
R. Verbylaitė (Lithuania)*

Genetic diversity of *Anaplasma phagocytophilum* in Red Deer (*Cervus elaphus*) from Lithuania and Norway

*Agnė Bikulčiūtė, Olav Rosef, Irma Ražanskė, Jana Radzijeuskaja, Maksim Bratchikov,
Algimantas Paulauskas (Lithuania, Norway)*

The performance and stability for agronomic and grain quality traits of Latvian spring barley varieties

Māra Bleidere, Ilze Grunte, Linda Legzdiņa (Latvia)

Molecular mechanisms of adaptation of eukaryotes in the conditions of global warming

Liubov Denisyuk, Jaroslav Smuzhanicja, Ihor Gorbatenko (Ukraine)

Genetic aspects of lactase persistence in the Eastern Ukraine population

*Olena Fedota, Volodymyr Babalian, Viktoria Borozenets, Sergii Mazniakov,
Nina Lysenko (Ukraine)*

Genetically determined differences in microclonal propagation of Silver birch (*Betula pendula*)

*Arnīs Gailis, Ineta Samsonė, Elva Giržgde, Rolands Kāpostiņš,
Āris Jansons (Latvia)*

Genetic characteristic of *Dermacentor reticulatus* in the Baltic countries

*Matas Galdikas, Algimantas Paulauskas, Jana Radzijeuskaja,
Eglė Galdikaitė-Brazienė (Lithuania)*

***Trichinella* spp. identification by molecular biology methods and larvae examination by fluorescence microscopy techniques with developed benzanthrone luminophores**

*Inese Gavarāne, Elena Kirilova, Muza Kirjušina, Sanita Kecko, Ilona Plaksenkova,
Ligita Mežaraupe, Ilze Rubeniņa (Latvia)*

Influence of SiO₂ nanoparticles on immature gametic cells of lime trees from Riga urban area

*Dace Grauda, Inta Belogradova, Gunta Cekstere, Dalius Butkauskas,
Nikole Krasnevskā, Isaak Rashal (Latvia)*

Mitochondrial DNA sequence variation in the European bison (*Bison bonasus*) population from Lithuania

*Loreta Griciuvienė, Algimantas Paulauskas, Irma Ražanskė, Rytas Papšys,
Algimantas Lūža (Lithuania)*

Genetic diversity of blackcurrant reversion virus

Ana Dovile Juskyte, Ingrida Mazeikiene, Vidmantas Stanys (Lithuania)

Genetic characterization of *Rickettsia* in mites (Dermanyssoidea)

Evelina Kaminskienė, Jana Radzijeuskaja, Algimantas Paulauskas (Lithuania)

Creation of chimeric genetic constructions of plant protein kinase IREH1 from *Arabidopsis thaliana*

Pavel Karpov, Svitlana Spivak, Dmytro Lytvyn, Alla Yemets, Yaroslav Blume (Ukraine)

Results of breeding program of the new fruit crop Japanese quince

Edite Kaufmane, Silvija Ruisa (Latvia)

Determination of self-incompatibility alleles of sweet cherry (*Prunus avium*) cultivars in Estonia

Agnes Kivistik, Kersti Kahu, Kristiina Laanemets (Estonia)

Nanoparticles as gene silencing tool in yellow alfalfa *Medicago falcata*

Inese Kokina, Marija Jermaļonoka, Inese Gavarāne, Ilona Plaksenkova (Latvia)

Cellular and molecular technologies for creation of intergeneric hybrids of *Festulolium*

Irina Kondratskaya, Valentina Stolepchenko, Olga Chizhik, Andrey Yukhimuk, Tatiana Mazur, Vladimir Reshetnikov, Petr Vasko (Belarus)

Genetic variation of *Astrantia major* population using for restoration of natural Belarus coenopopulations

A.V. Kruchonok, L.S. Sidor, V.V. Kravchuk, B.Y. Anoshenko, V.V. Titok (Belarus)

Investigation of the content of polyfructans in plants of buckwheat with different flower color

Tetiana Kyrpa-Nesmiian, Ievgenij Zaika (Ukraine)

First attempt to appreciate genetic structure of river lamprey population in Latvia, Kurzeme region

Amanda Lazdiņa, Juris Kibilds, Santa Purviņa (Latvia)

Character of inheritance of flower color of hybrids F1 of winter rape (*Brassica napus* L.)

Tetiana Levchenko, Mykola Slisarchuk, Yevhenii Zaika (Ukraine)

Use of *S. verrucosum* and SvSv-lines for overcoming unilateral incompatibility in crosses with wild allotetraploid potato species

Alexander Levy (Belarus)

APOA1, LPA and PLA2G7 gene polymorphism in patients with subclinical atherosclerosis and ischemic heart disease

Aleh Liaudanski, Olga Barbuk, Oleg Davydenko, Margarita Belskaya (Belarus)

Challenges to crop breeding and production to tackle climate change

Ligita Melece (Latvia)

Effect of farming system on genetic diversity of spring barley populations

Ieva Mežaka, Linda Legzdiņa (Latvia)

Why gout develops in some people but in others it does not?

Erika Nagle, Dmitrijs Rots, Nellija Luksa, Georgijs Moisejevs, Linda Gailīte (Latvia)

Use of circulating cell-free DNA of human pituitary adenoma

Helvijs Niedra, Raitis Pečulis, Vita Rovīte, Inga Balcere, Olīvija Caune, Jānis Stukēns, Ilze Konrāde, Valdis Pīrāgs, Jānis Kloviņš (Latvia)

Production of *Camelina sativa* plants bearing the genes for trehalose biosynthesis from yeast *Saccharomyces cerevisiae*

Larisa Nishchenko, Stanislav Isayenkov, Kostiantyn Dmytruk, Oleg Bayer, Jamal Rakhmetov, Liudmyla Sakhno, Alla Yemets (Ukraine)

Grain quality in bread wheat lines with introgression of genetic material

Olga Orlovskaya, Svetlana Vakula, Lubov Khotyleva, Alexander Kilchevsky (Belarus)

Genome of cultured pituispheres represents genome of pituitary adenoma

Raitis Pečulis, Ilona Mandrika, Ramona Petrovska, Vita Rovīte, Olivija Caune, Inga Balcere, Jānis Stukēns, Ilze Konrāde, Valdis Pīrāgs, Jānis Kloviņš (Latvia)

Ergot alkaloids in Estonian rye-containing foods

Lee Põllumaa, Elina Akk (Estonia)

The second intron length polymorphism of β -tubulin genes of *Aegilops biuncialis* Vis

Anastasiia Rabokon, Yaroslav Pirko, Lubov Kalafat, Natalia Kozub, Igor Sozinov, Andrii Demkovych, Yaroslav Blume (Ukraine)

First results of investigation into genetic diversity of Eurasian perch (*Perca fluviatilis*) mtDNA ATP6 gene

Adomas Ragauskas, Ieva Urbonaitė, Dalius Butkauskas (Lithuania)

Provenance differences in browsing damage in Lodgepole pine stands: case study in two experimental sites in Latvia

Raitis Rieksts-Riekstiņš, Una Neimane, Valērijs Safonovs, Rolands Kāpostiņš, Āris Jansons (Latvia)

Association of 4q25 variants and echocardiographic parameters in patients with atrial fibrillation

Irina Rudaka, Dmitrijs Rots, Arturs Uzars, Oskars Kalejs, Linda Gailite (Latvia)

Analysis of molecular genetic disorders of EGFR and KRAS in patients with lung adenocarcinoma in Belarusian patients using Next Generation Sequencing

Anna Shchayuk, Alena Mikhalenka, Olga Malysheva, Mikhail Shapetska, Kanstantsiya Yatsevich, Viktor Lyabetsky, Evelina Krupnova, Alexander Kilchevsky (Belarus)

The influence of various factors on the phenotypic variability of *Calendula officinalis* L. and *Nigella sativa* L. medicinal plants

Sviatlana Shysh, Hanna Shutava, Alena Spirydovich (Belarus)

The c.1397C>G and c.3209G>A mutations in exon 10 of CFTR gene in an infertile men with oligoastenozoospermia

Fatma Silan, Firdevs Dincsoy Bir, Ahmet Resit Ersay, Taner Karakaya, Ozturk Ozdemir (Turkey)

NGS study of barley plastid genome expands the knowledge about the molecular evolution of *Hordeum vulgare* L.

Maryna Siniuskaya, Natalia Lukhanina, Anna Makarevich, Vasili Pankratov, Aleg Liaudansky, Inna Goloenko, Andrei Shymkevich, Nina Danilenko, Oleg Davydenko (Belarus)

New mutation in the *LAMP2* gene causing Danon syndrome phenotype

Larysa Sivitskaya, Tatiyana Vaikhanskaya, Aleh Liaudanski, Tatsiyana Kurushka, Nina Danilenko, Oleg Davydenko (Belarus)

Implementation of advanced methods in potato breeding program

Ilze Skrabule, Ilze Dimante, Ieva Mežaka, Ināra Helena Konošonoka, Lidija Vojevoda (Latvija)

Phylogenetic study of the fire-bellied toad (*Bombina bombina*) population on northern border of areal (Latvia)

Natalija Skute, Baiba Krivmane, Dmitry Uzameckis, Aija Pupina, Mihails Pupins (Latvia)

RAPD analysis of the lady fern (*Athyrium filix-femina*) from industrial and natural recreational areas in Lithuania and Norway

Asta Stapulionytė, Juozas R. Lazutka, Arvid Odland, Jonas R. Naujalis, Åse Krøkje (Lithuania, Norway)

Results of wheat breeding in Latvia

Vija Strazdina, Valentina Fetere (Latvia)

The molecular identification of *Borrelia* bacteria in red squirrels and their ectoparasites in Lithuania

Jurgita Šimelevičiūtė, Indrė Lipatova, Algimantas Paulauskas (Lithuania)

Meta-analysis of male tumour karyotypes points towards an association between extra X-chromosome acquisition and para-triploidy

Ninel Miriam Vainshelbaum, Regina Kleina, Jekaterina Ērenpreisa (Latvia)

Developing of DNA-based human eye and hair color prediction model for forensic proposes in Belarus

Svetlana Vakula, Marina Shapturenko, Alexandr Kondratuk, Irena Gudievskaya, Larisa Marchenko, Sergey Borovko, Alexandr Kilchevsky (Belarus)

Polymorphism of *Anthocyanin 1* gene orthologs in the Solanaceae family

K.K. Yatsevich, N.A. Nekrashevich, T.V. Nikitinskaya, O.G. Babak, A.V. Kilchevsky (Belarus)

Is it sufficient with direct sequencing of *ATP7B* gene coding regions to diagnose Wilson disease?

Agnese Zarina, Anna Tutane, Dmitrijs Rots, Madara Kreile, Ieva Tolmane, Gunta Cernevska, Ieva Pukite, Zita Krumina, Linda Gailite (Latvia)

Changes of leukocyte mtDNA copy number in glaucoma patients and different age groups of healthy individuals

Egija Zole, Kristīne Baumanē, Beate Baumanē, Renāte Ranka (Latvia)

Genomic characterization of novel *Bacillaceae* bacteriophage Mimir87

Nikita Zrelavs, Andris Dišlers, Andris Kazaks (Latvia)

Performance of faba bean (*Vicia faba*) varieties in Latvia

Sanita Zute, Ligita Melece, Aivars Aboltins (Latvia)

Level of methylation of promoter of the *petE* gene is not related to formation of green plants *in vitro*

Kārlis Žagata, Dace Grauda, Isaak Rashal (Latvia)

Population structure and genetic diversity of the non-native plant species *Bunias orientalis* from the Baltic Countries

Donatas Žvingila, Jolanta Patamsytė, Donatas Naugžemys, Tatjana Čėsniėnė, Violeta Kleizaitė, Jurgita Butkuvienė (Lithuania)