

**МЕЖДУНАРОДНАЯ КОНФЕРЕНЦИЯ
ХРОМОСОМА 2018
ПРОГРАММА**



**INTERNATIONAL CONFERENCE
CHROMOSOME 2018
PROGRAM**

**20 - 24 августа 2018, Новосибирск, Россия
August 20 - 24, 2018, Novosibirsk, Russia**

Organizing Committee

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Prof. **Prim Singh**

Conference coordinator

Maria A. Graphodatskaya

Program overview

August 20, Monday

16:00–18:00 Conference participants registration
18:00–22:00 Welcome party

August 21, Tuesday

8:30–9:00 Conference participants registration
9:00–9:10 Conference opening
9:10–9:55 Opening lecture
9:55–10:50 **SECTION I**
Specialized regions of chromosomes: telomeres
and centromeres
10:50–11:10 Coffee break
11:10–11:50 **SECTION I**
Specialized regions of chromosomes: telomeres
and centromeres
11:50–12:45 **SECTION II**
Genome Editing
12:45–13:35 Lunch
13:35–16:40 **SECTION III**
Organization of the interphase chromosome
16:40–16:55 Coffee break
16:55–18:30 **SECTION IV**
Mitochondrial DNA
20:00–23:00 Cultural program

August 22, Wednesday

9:00–11:00 **SECTION V**
Genome evolution
11:00–11:20 Coffee break
11:20–13:10 **SECTION V**
Genome evolution

13:10–14:10 Lunch
14:10–16:55 **SECTION V**
Genome evolution
16:55–17:15 Coffee break
17:15 – 19:00 Cultural program

August 23, Thursday

9:00–11:10 **SECTION VI**
Chromosomal abnormalities and medical genetics
11:10–11:30 Coffee break
11:30–12:30 **SECTION VI**
Chromosomal abnormalities and medical genetics
12:30–13:30 Lunch
13:30–14:30 Poster session
14:30 Cultural program

August 24, Friday

9:00–11:00 **SECTION VII**
Epigenetics
11:00–11:15 Coffee break
11:15–13:05 **SECTION VII**
Epigenetics
13:05–14:00 Lunch
14:00–15:00 **SECTION VII**
Epigenetics
15:00–16:15 **SECTION VIII**
Cell Division
16:15–16:35 Coffee break
16:35–17:05 **SECTION VIII**
Cell Division
17:05–19:00 Conference concluding remarks, Poster session
19:00 Farewell party

Program

August 20, Monday

- 16:00–18:00 Conference participants registration, Foyer of Small Hall
18:00–22:00 Welcome party, Restaurant of the House of Scientists

August 21, Tuesday

- 8:30–9:00 Conference participants registration, Foyer of Small Hall
9:00–9:10 Conference opening. **Prof. Igor F. Zhimulev**
- 9:10–9:55 Opening lecture
Prof. Ingo Schubert, Leibniz Institute of Plant Genetics and Crop Plant Research, Gatersleben, Germany
Linking genome size and karyotype evolution via DNA double-strand break repair

Section I

Specialized regions of chromosomes: telomeres and centromeres

Co-chairmen: Dr. Alexander V. Vershinin, Prof. Ingo Schubert

- 9:55–10:15 **Dr. Veit Schubert**, Leibniz Institute of Plant Genetics and Crop Plant Research, Gatersleben, Germany
Plant centromere architecture variability revealed by superresolution microscopy
- 10:15–10:30 **Dr. Elena V. Evtushenko**, Institute of Molecular and Cellular Biology, Novosibirsk, Russia
Evolutionary dynamics of the centromeric histone CENH3 in the Triticeae tribe
- 10:30–10:50 **Dr. Alla I. Kalmykova**, Institute of Molecular Genetics, Moscow, Russia
Telomere biology in the *Drosophila* germline and in early development

10:50–11:10 **Coffee break**

11:10–11:30 **Dr. Laura Ciapponi**, Sapienza University, Rome, Italy
Interactions between pendolino and histone modifiers reveal an epigenetic regulation of *Drosophila* telomere stability

11:30–11:50 **Dr. Grazia Daniela Raffa**, Sapienza University, Rome, Italy
The TGS1 hypermethylase regulates intracellular distribution and accumulation of human telomerase RNA

Section II Genome Editing

Co-chairmen: Prof. Ludmila F. Gulyaeva, Prof. Andreas Houben

11:50–12:10 **Prof. Andreas Houben**, Leibniz Institute of Plant Genetics and Crop Plant Research, Gatersleben, Germany
Live cell CRISPR imaging in plants

12:10–12:30 **Prof. Dmitry O. Zharkov**, Institute of Chemical Biology and Fundamental Medicine, Novosibirsk, Russia
DNA repair-deficient cells: from disease models to genotoxicity testing tools

12:30–12:45 **Oleg V. Andreyenkov**, Institute of Molecular and Cellular Biology, Novosibirsk, Russia
Directed formation of deletions in *Notch* regulatory region using CRISPR-Cas-mediated targeted genome editing method

12:45–13:35 **Lunch**

Section III

Organization of the interphase chromosome

Co-chairmen: Dr. Sergey A. Demakov, Prof. Gunter Reuter

- 13:35–14:00 **Prof. Igor F. Zhimulev**, Institute of Molecular and Cellular Biology, Novosibirsk, Russia
Polytene chromosomes – a portrait of functional organization of the *Drosophila* genome
- 14:00–14:15 **Dr. Tatiana Yu. Zykova**, Institute of Molecular and Cellular Biology, Novosibirsk, Russia
Interband architecture in *Drosophila* polytene chromosomes
- 14:15–14:40 **Prof. Sergey V. Razin**, Institute of Gene Biology, Moscow, Russia
Single cell Hi-C maps of *Drosophila melanogaster* genome
- 14:40–14:55 **Dr. Tatyana D. Kolesnikova**, Institute of Molecular and Cellular Biology, Novosibirsk, Russia
Spatial-temporal organization of replication in polytene chromosomes of *Drosophila*
- 15:55–15:15 **Prof. Alexey A. Aravin**, California Institute of Technology, Pasadena, USA
Interplay of chromatin and small RNA pathways in *Drosophila*
- 15:15–15:35 **Prof. Katalin Fejes Toth**, California Institute of Technology, Pasadena, USA
New insights into Piwi-mediated transcriptional silencing
- 15:35–15:50 **Dr. Nadezhda E. Vorobyeva**, Institute of Gene Biology, Moscow, Russia
Molecular mechanisms of ecdysone-dependent genes transcriptional regulation

- 15:50–16:05 **Dr. Vladimir N. Babenko**, Institute of Cytology and Genetics, Novosibirsk, Russia
Transposable elements mediated CTCF binding sites: their nuclear compartments localization in human genome
- 16:05–16:20 **Dr. Elena V. Kiseleva**, Institute of Cytology and Genetics, Novosibirsk, Russia
Anomalous coupling of endoplasmic reticulum with the nuclear envelope
- 16:20–16:40 **Dr. Anna Royou**, European Institute of Chemistry and Biology, Talence, France
The faithful transmission of broken chromosomes

16:40–16:55 **Coffee break**

Section IV Mitochondrial DNA

Co-chairmen: Prof. Dmitry Yu. Sherbakov, Dr. Stanislav V. Dryomov

- 16:55–17:10 **Dr. Stanislav V. Dryomov**, Institute of Molecular and Cellular Biology, Novosibirsk, Russia
Reconstructing the genetic history of the Chukchi: new insights from mtDNA perspective
- 17:10–17:25 **Dr. Rem I. Sukernik, Dr. Elena B. Starikovskaya**, Institute of Molecular and Cellular Biology, Novosibirsk, Russia
The mitochondrial genomic legacy of the Early Russian settlers in Northeasternmost Siberia
- 17:25–17:40 **Prof. Dmitry Yu. Sherbakov**, Limnological Institute, Irkutsk, Russia
Evolution of mitochondrial genomes in Baikalian endemic invertebrates

- 17:40–17:55 **Dr. Natalia G. Andreyenkova**, Institute of Molecular and Cellular Biology, Novosibirsk, Russia
Phylogeography of the black kite (*Milvus migrans*) based on mitochondrial *cytochrome b* gene polymorphism
- 17:55–18:10 **Dr. Alexey P. Kryukov**, Institute of Biology and Soil Science, Vladivostok, Russia
Phylogeography and hybridization of corvid birds in Palearctic
- 18:10–18:30 **Dr. Iliia O. Mazunin**, Immanuel Kant Baltic Federal University, Kaliningrad, Russia
Mitochondrial genome surgery
- 20:00–23:00 **Cultural program**

August 22, Wednesday

Section V

Genome evolution

Co-chairmen: Dr. Vladimir A. Trifonov, Prof. Igor V. Sharakhov

- 9:00–9:20 **Prof. Alexander S. Grafodatsky**, Institute of Molecular and Cellular Biology, Novosibirsk, Russia
From 2n to VGP
- 9:20–9:40 **Dr. Denis M. Larkin**, Royal Veterinary College, London, UK
Animal chromosomal evolution: the extinct species perspective
- 9:40–10:00 **Dr. Irina Yu. Bakloushinskaya**, Koltzov Institute of Developmental Biology, Moscow, Russia
Male-specific genes rescue and features of meiosis in mole voles (*Ellobius*, Rodentia) lacking a Y chromosome

- 10:00–10:15 **Dmitrii I. Ostromyshenskii**, Institute of Cytology,
St. Petersburg, Russia
Tandem repeats in *Cricetulus griseus* genome in silico and
in situ
- 10:15–10:30 **Dr. Alexey I. Makunin**, Institute of Molecular and Cellular
Biology, Novosibirsk, Russia
Summary of mammalian B chromosome sequencing
- 10:30–10:45 **Dr. Alsu F. Saifitdinova**, St. Petersburg State University,
St. Petersburg, Russia
Enigma of transcription on the lateral loops of avian
lampbrush chromosomes
- 10:45–11:00 **Dr. Vladimir E. Gokhman**, Botanical Garden, Moscow
State University, Moscow, Russia
Karyotypic features of parasitoid Hymenoptera revealed
by base-specific fluorochromes and FISH
- 11:00–11:20 **Coffee break**
- 11:20–11:40 **Dr. Vladimir A. Trifonov**, Institute of Molecular and
Cellular Biology, Novosibirsk, Russia
Polyploidy and genome evolution of ray-finned fishes
- 11:40–11:55 **Dr. Anna V. Kukekova**, University of Illinois at Urbana-
Champaign, Urbana, USA
Construction of red fox chromosomal fragments from the
short-read genome assembly
- 11:55–12:10 **Dr. Svetlana A. Galkina**, St. Petersburg State University,
St. Petersburg, Russia
The Japanese quail genome: conservative regions analysis
and repeat content deciphering

- 12:10–12:25 **Alessio Iannucci**, University of Florence, Florence, Italy
Evolution of karyotype and sex chromosomes in monitor lizards: new insights from cross species chromosome painting
- 12:25–12:40 **Sergey S. Ryumin**, St. Petersburg State University, St. Petersburg, Russia
On trends in selection of the eliminated genome during early gametogenesis of interspecies hybrids from water frogs *Pelophylax esculentus* complex
- 12:40–12:55 **Anna S. Druzhkova**, Institute of Molecular and Cellular Biology, Novosibirsk, Russia
The phylogeographical history of the brown bear (*Ursus arctos* Linnaeus) in Northeast Eurasia
- 12:55–13:10 **Dr. Arcady A. Putilov**, Institute of Molecular Biology and Biophysics, Novosibirsk, Russia
What was useful for us in the Neanderthal genome? An example of DNA regions regulating circadian clocks and sleep

13:10–14:10 **Lunch**

Section V

Genome evolution

Co-chairmen: Prof. Alexey A. Aravin, Prof. Maurizio Gatti

- 14:10–14:35 **Prof. Vladimir N. Stegnyy**, Tomsk State University, Tomsk, Russia
Epigenetic mechanisms of speciation
- 14:35–14:55 **Prof. Igor V. Sharakhov**, Virginia Polytechnic Institute and State University, Blacksburg, USA
Chromosome organization and dynamics in *Anopheles* species and their hybrids

- 14:55–15:10 **Dr. Maria V. Sharakhova**, Virginia Polytechnic Institute and State University, Blacksburg, USA
Genomic divergence and chromosomal differentiation in the malaria mosquito *Anopheles messeae* sensu lato
- 15:10–15:25 **Dr. Svetlana A. Romanenko**, Institute of Molecular and Cellular Biology, Novosibirsk, Russia
Intrachromosomal rearrangements within evolutionarily conserved syntenic blocks
- 15:25–15:40 **Ilya G. Kichigin**, Institute of Molecular and Cellular Biology, Novosibirsk, Russia
Studying anolis and gekkota sex chromosomes by isolated chromosome sequencing
- 15:40–15:55 **Anastasia A. Proskuryakova**, Institute of Molecular and Cellular Biology, Novosibirsk, Russia
Evolution of X chromosome in the order Cetartiodactyla
- 15:55–16:10 **Olga O. Bochkareva**, Skolkovo Institute of Science and Technology, Moscow, Russia
Evolution of bacterial chromosomes
- 16:10–16:25 **Dr. Yury Yu. Ilinsky**, Institute of Cytology and Genetics, Novosibirsk, Russia
Bacterial species concept and rampant recombination of *Wolbachia* genomes
- 16:25–16:40 **Prof. Nikolay B. Rubtsov, Dr. Kira S. Zadesenets**, Institute of Cytology and Genetics, Novosibirsk, Russia
Karyotypic instability in macrostomid evolution
- 16:40–16:55 **Prof. Aleksander G. Bugrov**, Institute of Systematics and Ecology of Animals, Novosibirsk, Russia
Evolution of additional elements of chromosome set in the grasshopper's populations

16:55–17:15 **Coffee break**

17:15–19:00 **Cultural program**

August 23, Thursday

Section VI

Chromosomal abnormalities and medical genetics

Co-chairmen: Dr. Dmitry V. Yudkin, Prof. Prim Singh

- 9:00–9:30 **Dr. Frank Kooy**, University of Antwerp, Antwerpen, Belgium
The GABAergic system as a therapeutic target for the fragile X syndrome and related neurodevelopmental disorders
- 9:30–9:50 **Prof. Olga I. Lavrik**, Institute of Chemical Biology and Fundamental Medicine, Novosibirsk, Russia
Poly(ADP-ribose) polymerases in regulation of DNA repair and longevity
- 9:50–10:05 **Prof. Ludmila F. Gulyaeva**, Federal Research Centre fundamental and translational medicine, Novosibirsk, Russia
Effects of xenobiotics on microRNA expression
- 10:05–10:35 **Dr. Thomas Liehr**, Institute of Human Genetics, Jena, Germany
Parental origin of deletions and duplications – about the necessity to check for cryptic inversions
- 10:35–10:55 **Prof. Igor N. Lebedev, Dr. Ekaterina N. Tolmacheva**
Research Institute of Medical Genetics, TNRMC, Tomsk, Russia
Epigenetic silencing of X-linked CNV by skewed X-inactivation

10:55–11:10 **Dr. Dmitry V. Yudkin**, Institute of Molecular and Cellular Biology, Novosibirsk, Russia
Molecular structure of 5' untranslated region of FMR1 gene and symptoms severity in Fragile X syndrome patients

11:10–11:30 **Coffee break**

11:30–11:45 **Dr. Tatyana A. Gayner**, Center of New Medical Technologies, Novosibirsk, Russia
Chromosomal pathology in the fetus with developing and undeveloping pregnancy

11:45–12:00 **Dr. Tatiana V. Nikitina**, Research Institute of Medical Genetics, TNRMC, Tomsk, Russia
Dynamics of the ring chromosomes instability during of the somatic cells reprogramming

12:00–12:15 **Dr. Nikolay A. Skryabin**, Research Institute of Medical Genetics, TNRMC, Tomsk, Russia
Runs of homozygosity in miscarriages from families with recurrent pregnancy loss

12:15–12:30 **Renata R. Savchenko**, Research Institute of Medical Genetics, TNRMC, Tomsk, Russia
Effects of ADAMTS1 and THBS1 genes knockout on the radiation-induced cellular response to DNA damage

12:30–13:30 **Lunch**

13:30–14:30 **Poster session**

14:30 **Cultural program**

August 24, Friday

Section VII

Epigenetics

Co-chairmen: Dr. Alexey V. Pindyurin, Prof. Jan Larsson

- 9:00–9:25 **Prof. Gunter Reuter**, Martin Luther University, Halle, Germany
The *Su(var)* gene complement and new chromatin functions in *Drosophila*
- 9:25–9:40 **Dr. Dmitry E. Koryakov**, Institute of Molecular and Cellular Biology, Novosibirsk, Russia
Genome-wide analysis of SU(VAR)3-9 distribution in chromosomes of *Drosophila melanogaster*
- 9:40–10:05 **Prof. Thomas Jenuwein**, Max Planck Institute of Immunobiology and Epigenetics, Freiburg, Germany
Genistein-induced stress signaling selectively derepresses major satellite repeat transcription in mouse heterochromatin
- 10:05–10:25 **Prof. Jan Larsson**, Umea University, Umea, Sweden
Painting of fourth a chromosome-specific protein regulating the 4th chromosome in *Drosophila melanogaster*
- 10:25–10:45 **Dr. Yuri Schwartz**, Umea University, Umea, Sweden
Bringing Polycomb repression to genes and keeping it in check
- 10:45–11:00 **Dr. Stepan N. Belyakin**, Institute of Molecular and Cellular Biology, Novosibirsk, Russia
Functional dissection of *Drosophila melanogaster* SUUR protein influence on H3K27me3 profile
- 11:00–11:15 **Coffee break**

- 11:15–11:30 **Dr. Mikhail S. Klenov**, Institute of Molecular Genetics, Moscow, Russia
Regulation of expression of rDNA copies with retrotransposon insertions in *Drosophila*
- 11:30–11:45 **Dr. Petr P. Laktionov**, Institute of Molecular and Cellular Biology, Novosibirsk, Russia
Genome-wide analysis of gene regulation mechanisms during *Drosophila* spermatogenesis
- 11:45–12:00 **Artem Ilyin**, Institute of Molecular Genetics, Moscow, Russia
Analysis of the dynamic of chromosome interactions with the nuclear lamina during *Drosophila* spermatogenesis
- 12:00–12:20 **Prof. Prim Singh**, Nazarbayev University School of Medicine, Astana, Republic of Kazakhstan
Heterochromatin and age reprogramming
- 12:20–12:35 **Dr. Alexander Yu. Konev**, Petersburg Nuclear Physics Institute, Gatchina, Russia
Study of the CHD1 chromatin assembly and remodeling factor functions in *Drosophila*
- 12:35–12:50 **Dr. Alexey V. Pindyurin**, Institute of Molecular and Cellular Biology, Novosibirsk, Russia
Input of DNA sequences located in the transcription termination region in gene expression level
- 12:50–13:05 **Dr. Stanislav A. Vasilyev**, Research Institute of Medical Genetics, TNRMC, Tomsk, Russia
LINE-1 methylation and genome stability in human somatic cells

13:05–14:00 **Lunch**

- 14:00–14:15 **Dr. Anna A. Ogienko**, Institute of Molecular and Cellular Biology, Novosibirsk, Russia
The influence of genetic background in *Drosophila* fly lines on results on example of line №6458 from Bloomington Drosophila Stock Center
- 14:15–14:30 **Dr. Daria V. Kopytova**, Institute of Gene Biology, Moscow, Russia
The involvement of dPCID2 protein in the transport of mRNA in the cytoplasm
- 14:30–14:45 **Dr. Maria M. Kurshakova**, Institute of Gene Biology, Moscow, Russia
TRF4, the novel TBP-related protein of *D. melanogaster*, in the course of evolution acquired the new functions in the ER-associated processes in the cytoplasm
- 14:45–15:00 **Dr. Katarina A. Akhmetova, Asja S. Khrushcheva**, Novosibirsk State University, Institute of Cytology and Genetics, Novosibirsk, Russia
The impact of the somatic tissue environment on primordial germline cells migration during *Drosophila* embryogenesis

Section VIII Cell Division

Co-chairmen: Dr. Yuri Schwartz, Dr. Anna Royou

- 15:00–15:30 **Prof. Maurizio Gatti**, Sapienza University, Rome, Italy
Direct roles of the Sf3A2 and Prp31 splicing factors in mitotic chromosome segregation
- 15:30–15:45 **Gera A. Pavlova**, Institute of Molecular and Cellular Biology, Novosibirsk, Russia
Roles of *Drosophila* NSL complex components in mitosis

- 15:45–16:00 **Julia V. Popova**, Institute of Molecular and Cellular Biology, Novosibirsk, Russia
The moonlighting functions of the NON3 protein in *Drosophila melanogaster*
- 16:00–16:15 **Dr. Evgenia N. Andreyeva**, Institute of Molecular and Cellular Biology, Novosibirsk, Russia
The CG17337 protein is involved in mitosis progression and control the cell death in *Drosophila melanogaster*

16:15–16:35 **Coffee break**

- 16:35–16:50 **Anastasia A. Zhuravleva**, Institute of Cytology and Genetics, Novosibirsk, Russia
Prophase chromosomes dynamics in wheat-rye F1 hybrids with different patterns of meiosis
- 16:50–17:05 **Dr. Sergey R. Mursalimov**, Institute of Cytology and Genetics, Novosibirsk, Russia
Cytomixis in male meiosis: monocots vs dicots

17:05–19:00 **Conference concluding remarks**
Poster session

19:00 **Farewell party**

Posters

Section I

Specialized regions of chromosomes: telomeres and centromeres

Anastasiya A. Yushkova, Institute of Molecular and Cellular Biology, Novosibirsk, Russia

The role of the NON3 (Novel Nucleolar protein 3) protein in the formation of pericentric heterochromatin in *Drosophila melanogaster*

Elizaveta I. Radion, Institute of Molecular Genetics, Moscow, Russia

The role of piRNA system in maintaining of chromatin structure of telomeric retrotransposon TART in *Drosophila*

Maria Yu. Kordyukova, Institute of Molecular Genetics, Moscow, Russia

Subcellular localization and mechanism of transport of telomeric retrotransposon HeT-A ribonucleoprotein particles in the *Drosophila* germline and early embryogenesis

Yulia A. Lipikhina, Institute of Molecular and Cellular Biology, Novosibirsk, Russia

The activity of the centromeric variant of histone H3 (CENH3) in triticales hybrids

Yulia A. Lipikhina, Institute of Molecular and Cellular Biology, Novosibirsk, Russia

Secalotriticum hybrids as a new model for studying the activity of genes encoding centromere specific protein CENH3

Section III

Organization of the interphase chromosome

Dr. Galina V. Pokholkova, Institute of Molecular and Cellular Biology, Novosibirsk, Russia

Tethering of CHROMATOR and dCTCF insulator proteins results in decompaction of condensed bands in the *Drosophila melanogaster*

polytene chromosomes but does not affect their transcription and replication timing

Dr. Irina O. Bogolyubova, Institute of Cytology, St. Petersburg, Russia
Some features of the molecular composition of heterochromatin associated with nucleolus precursor bodies in the mouse embryo

Darya S. Sidorenko, Institute of Molecular and Cellular Biology, Novosibirsk, Russia
Molecular and genetic organization of bands and interbands in the dot chromosome of *Drosophila melanogaster*

Varvara A. Khoroshko, Institute of Molecular and Cellular Biology, Novosibirsk, Russia
Gene location in intercalary chromatin bands of *Drosophila melanogaster* polytene chromosomes

Zhuldyz Sailau, Dr. Dmitriy S. Bogolyubov, Dr. Irina O. Bogolyubova, Institute of Cytology, St. Petersburg, Russia
The dynamics of intranuclear localization of Daxx protein in mouse early embryogenesis

Section V

Genome evolution

Dr. Alexey I. Makunin, Wellcome Sanger Institute, Cambridge, UK
Using multiple reference genomes to identify phylogenetically informative markers for amplicon sequencing: an example from *Anopheles* mosquitoes

Dr. Anna S. Zhuk, St. Petersburg State University, St. Petersburg, Russia
Nature of «illegitimate» hybrids without chromosome III in the alpha-test on the yeast *Saccharomyces cerevisiae*

Dr. Gleb N. Artemov, Tomsk State University, Tomsk, Russia
Evolution of X chromosome of malaria mosquitoes from *Maculipennis* group

Dr. Maret M. Acaeva, Chechen State University, Chechnya, Russia
Evaluation of the transgenerational effect of drugs on the model of SC in mouse spermatocytes

Dr. Nina Sh. Bulatova, Severtsov Institute of Ecology and Evolution, Moscow, Russia
Karyotype discoveries in Ethiopian endemic rodents with regards to the illusory Y chromosome appearance in the sex pair

Dr. Sergey A. Simanovsky, Severtsov Institute of Ecology and Evolution, Moscow, Russia
Synaptonemal complex analysis in spermatocytes of three *Nothobranchius* fish species with X1X1X2X2/X1X2Y sex chromosome system

Dr. Svetlana V. Pavlova, Severtsov Institute of Ecology and Evolution, Moscow, Russia
Cytogenetic analyses of small mammals (rodents and insectivores) from Tibet, China

Dr. Violetta R. Beklemisheva, Institute of Molecular and Cellular Biology, Novosibirsk, Russia
Pinniped karyotype evolution and ancestral carnivore karyotype refinement revealed by comparative chromosome painting

Dr. Violetta R. Beklemisheva, Institute of Molecular and Cellular Biology, Novosibirsk, Russia
Cytogenetic analyses of leopard cat subspecies (*Prionailurus bengalensis*) revealed Y-chromosome polymorphism

Daria A. Andreyushkova, Institute of Molecular and Cellular Biology, Novosibirsk, Russia
Revealing of paralogous regions in sterlet (*Acipenser ruthenus*) genome

Dmitry Yu. Prokopov, Institute of Molecular and Cellular Biology, Novosibirsk, Russia
Collared lemming (*Dicrostonyx torquatus*) karyotype analysis using high-throughput sequencing methods

Vanessa Milioto, University of Palermo, Palermo, Italy
Cytogenetic characterization of two *Graphiurus* species (Rodentia) from South Africa through C banding, FISH with 18-28S rDNA and telomeric (TTAGG)_n probes

German V. Osipov, Institute of Molecular and Cellular Biology, Novosibirsk, Russia
Extraction of ancient DNA and sequencing of mitochondrial genomes of representatives of the feline family

Katerina V. Tishakova, Institute of Cytology and Genetics, Novosibirsk, Russia
Evolution of recombination in geckos (Gekkota, Squamata, Reptilia)

Kseniya O. Popova, Institute of Molecular and Cellular Biology, Novosibirsk, Russia
The study of ancient DNA of fossil representatives of the genus *Alces*

Agda Maria Bernegossi, Universidade Estadual Paulista, São Paulo, Brazil
Generation of translocated chromosomes probes of the *Mazama gouazoubira* species by microdissection

Maria A. Pobedintseva, Institute of Molecular and Cellular Biology, Novosibirsk, Russia
Population genetics of Acipenseridae in Siberian rivers

Valentina G. Tambovtseva, Koltzov Institute of Developmental Biology, Moscow, Russia
Hybridization and meiotic puzzle: a case of *Ellobius tancrei*

Section VI

Chromosomal abnormalities and medical genetics

Dr. Irina S. Kolesnikova, Institute of Molecular and Cellular Biology, Novosibirsk, Russia

Altered rRNA levels in possible connection to intellectual disability

Dr. Natalia A. Lemskaya, Institute of Molecular and Cellular Biology, Novosibirsk, Russia

Marker chromosomes detected in patients with intellectual disability

Aksinya N. Uvarova, Engelhardt Institute of Molecular Biology, Moscow, Russia

Effect of new minor isoform of securin (PTTG1) on proliferation and its potential role in mitosis

Irina V. Grishchenko, Institute of Molecular and Cellular Biology, Novosibirsk, Russia

Active transcription and CGG repeat instability in human tissue culture

Maria E. Lopatkina, Research Institute of Medical Genetics, TNRMC, Tomsk, Russia

Differential gene expression in neurons, derived from induced pluripotent stem cells of patients with mental retardation and reciprocal 3p26.3 microdeletion and microduplication

Yana V. Purvinsh, Institute of Molecular and Cellular Biology, Novosibirsk, Russia

Research of the influence of active transcription in the expansion (CGG) n repeats normal length in model lines immortalized B-lymphocytes of patients with Fragile X syndrome

Section VII

Epigenetics

Prof. Olga V. Iarovaia, Institute of Gene Biology, Moscow, Russia

The role of nucleolus in IGH locus rearrangements

Dr. Andrew Newman, Institut für Zell- und Neurobiologie, Berlin, Germany
Heterochromatin Protein 1, endogenous retroviruses, and the space between

Dr. Jafar Sharif, RIKEN IMS, Kanagawa-ken, Japan
DNA methylation and histone H3 lysine 9 (H3K9) tri-methylation are two important epigenetic marks that repress genes and transposable elements in mammals and other species

Dr. Lidiya V. Boldyreva, Institute of Molecular and Cellular Biology, Novosibirsk, Russia
Minor variations in the region immediately downstream of eGFP reporter 3'UTR notably increases level of its expression in mouse and human, but not in *Drosophila* cell cultures

Dr. Natalia Yu. Svistunova, Russian Scientific Research Institute of Medicinal and Aromatic Plants, Moscow, Russia
Cytogenetic stability of seeds of some medicinal plants species depending on storage conditions

Dr. Olesya A. Sokolova, Institute of Molecular Genetics, Moscow, Russia
Upregulation of somatic TEs during *Drosophila* development leads to the germline differentiation defects due to a decrease in the number of escort cell progenitors

Dr. Sergey I. Glukhov, Institute of Molecular Genetics, Moscow, Russia
Su(Hw) insulators block transcription, specific chromatin assembly and piRNA production within piRNA clusters in *Drosophila* germline

Dr. Silke Jensen, French National Center of Scientific Research, Villeurbanne, France
Epigenetic prerequisites for the production of small RNAs from transgenic piRNA clusters

Dr. Zarema M. Biyasheva, Al-Farabi Kazakh National University, Almaty, Republic of Kazakhstan
Modeling of alpha-particles epigenetic effects in short-term test on *Drosophila*

Anastasia V. Kovina, Institute of Gene Biology, Moscow, Russia
Organization of regulatory systems of fused domain of a/b-globin genes in *Danio rerio*

Juliya A. Galimova, Asja S. Khrushcheva, Novosibirsk State University, Institute of Cytology and Genetics, Novosibirsk, Russia
Chromatin-remodeling factor GAGA regulates various types of cell migration during gonad development in *Drosophila* females

Baira Godneeva, Institute of Molecular Genetics, Moscow, Russia
The role of the SUMO ligase Su(var)2-10 in deposition of repressive chromatin marks and the piRNA pathway

Igor S. Osadchiy, Institute of Gene Biology, Moscow, Russia
Study of TRF2 recruitment to gene promoters

Stanislav E. Romanov, Institute of Molecular and Cellular Biology, Novosibirsk, Russia
The role of insulator protein CP190 in tissue-specific gene regulation during spermatogenesis of *Drosophila melanogaster*

Yuliya N. Ivanova, Institute of Cytology and Genetics, Novosibirsk, Russia
Structural alterations of chromosomes in wheat hybrids obtained using the 1Rv(1A) line

Section VIII

Cell Division

Alyona V. Razuvaeva, Institute of Molecular and Cellular Biology, Novosibirsk, Russia.
The roles of Asp and Patronin in mitotic spindle formation in *Drosophila*

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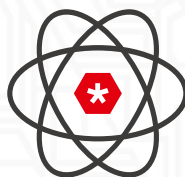
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