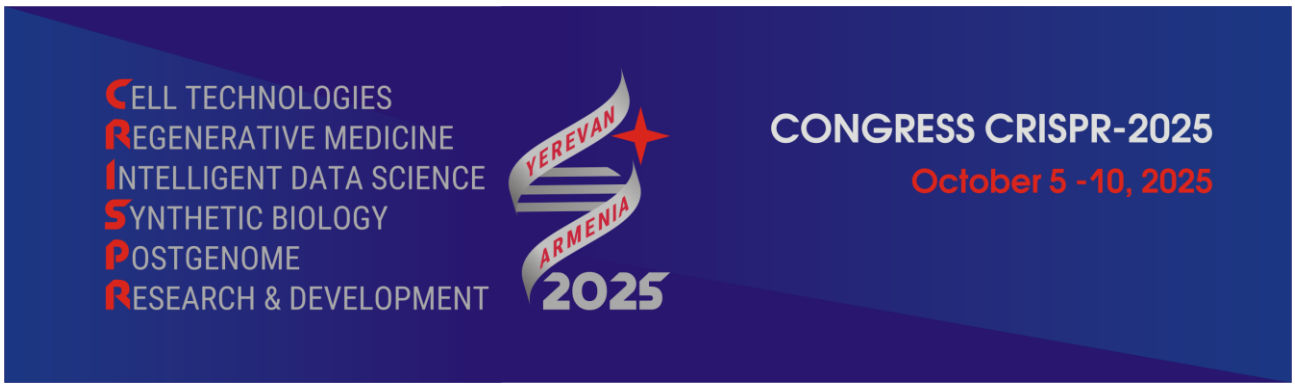
CRISPR-2025

SCIENTIFIC PROGRAM OF THE CONGRESS

CELL TECHNOLOGIES
REGENERATIVE MEDICINE
INTELLIGENT DATA SCIENCE
SYNTHETIC BIOLOGY
POSTGENOME
RESEARCH & DEVELOPMENT

YEREVAN
ARMENIA
2025

OCTOBER 5–10, 2025
YEREVAN, ARMENIA



Дорогие коллеги!

Организационный комитет Третьего международного конгресса “CRISPR-2025” приветствует участников в гостеприимном солнечном Ереване!

Предыдущие конгрессы, проведённые в 2018-м и 2023-м годах в Новосибирске, продемонстрировали востребованность и актуальность формата мероприятия.

Стремительно совершенствующиеся методы геномного редактирования, в том числе в области клинического применения CRISPR-систем, требуют всестороннего осмысления с учётом различных областей знаний. Именно поэтому по сложившейся традиции мы предлагаем широкий спектр направлений, которые будут обсуждаться на конгрессе “CRISPR-2025”:

- **C**ell Technologies
- **R**egenerative Medicine
- **I**ntelligent Data Science
- **S**ynthetic Biology
- **P**ostgenome
- **R**esearch & Development.

Участники конгресса представят передовые разработки и фундаментальные исследования в области CRISPR, их применение в медицине, сельском хозяйстве, создании фармакологических препаратов. Предстоящий конгресс станет пространством для взаимодействия учёных, врачей и представителей индустрии, обмена идеями и эффективного сотрудничества.

Желаем всем участникам плодотворной работы!

Оргкомитет конгресса «CRISPR-2025»

Глубокоуважаемые коллеги, дорогие друзья!

Разрешите приветствовать Вас
на Третьем международном конгрессе «CRISPR-2025», который проходит в солнечном Ереване при традиционном гостеприимстве руководителя Конгресса – профессора Сурена Минасовича Закияна!

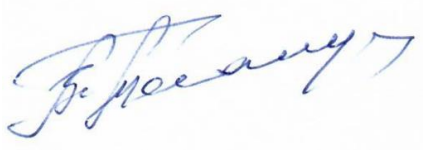
Слияние генетических технологий и задач медицины стало закономерным результатом прогресса в области молекулярной и клеточной биологии, физиологии регенеративных процессов и биомедицины. Сейчас мы уже не просто способны отслеживать и управлять транскрипционными программами или проводить точечные вмешательства в последовательности нуклеиновых кислот. Мы обладаем возможностью интегрировать эти данные с наблюдениями за физиологическими процессами на уровне от единичных клеток до тканей и таким образом выявлять новые закономерности и мишени для решения проблем медицины.

Одной из главных задач сейчас стало создание базы здорового и активного долголетия, для решения которой необходимо выяснение механизмов регуляции обновления и поддержания клеточного состава тканей. Эти процессы лежат у истоков сохранения функциональной активности органов и тела человека в целом, а управление репарацией, которая запускается при повреждении, позволяет восстанавливать утраченные клетки и ткани. В совокупности эти задачи решает регенеративная медицина, в которой все большее место находят генетические технологии – от генной терапии до анализа транскриптома.

Мы постоянно расширяем наши представления о генетической регуляции и ее роли в дифференцировке и перепрограммировании клеточных элементов, разрешение анализа транскриптома достигло фантастического уровня, а методы генной инженерии, дизайна векторов и редактирования генома подарили нам целый арсенал инструментов для воздействий на эти процессы.

От лица моих коллег и «Общества регенеративной медицины» желаю всем участникам продуктивных дискуссий, интересных сообщений и новых успехов в научной работе!

Директор медицинского научно-образовательного института
МГУ имени М.В. Ломоносова,
Президент «Общества регенеративной медицины»
Академик РАН В.А. Ткачук



Участникам конгресса CRISPR-2025
Председателю конгресса проф. С. М. Закияну

Уважаемый Сурен Минасович,
уважаемые участники конгресса!

Создание технологий внесения коррекций в генетические программы является на сегодня, пожалуй, самой важной задачей современной биологии. Такие технологии открывают широчайшие возможности для развития научных исследований и очевидны их применения в биотехнологии, сельском хозяйстве и в медицине.

Быстро развивающиеся события в области разработки средств управления геномами требуют эффективного обмена информацией между учеными. Научные исследования в этой области и проекты, направленные на получение практических результатов могут наиболее успешно развиваться при условии использования междисциплинарных подходов, крайне важен контакт ученых различных специальностей. Серьезной проблемой является подготовка квалифицированных кадров для развития генетических технологий.

Поэтому огромное значение для успешного развития направления, определяющего будущее биологии и медицины, является проведение научных конгрессов, собирающих ведущих специалистов и молодых исследователей. Понимая важность проблемы, профессор Сурен Минасович Закиян регулярно организует такие конгрессы, все они получили высокую оценку участников. Уверен, что и конгресс CRISPR-2025 будет успешным.

Желаю успехов и здоровья участникам конгресса!

академик В. В. Власов
председатель Объединенного ученого Совета
по биологическим наукам СО РАН

Уважаемые организаторы и участники

Третьего Международного конгресса CRISPR-2025!

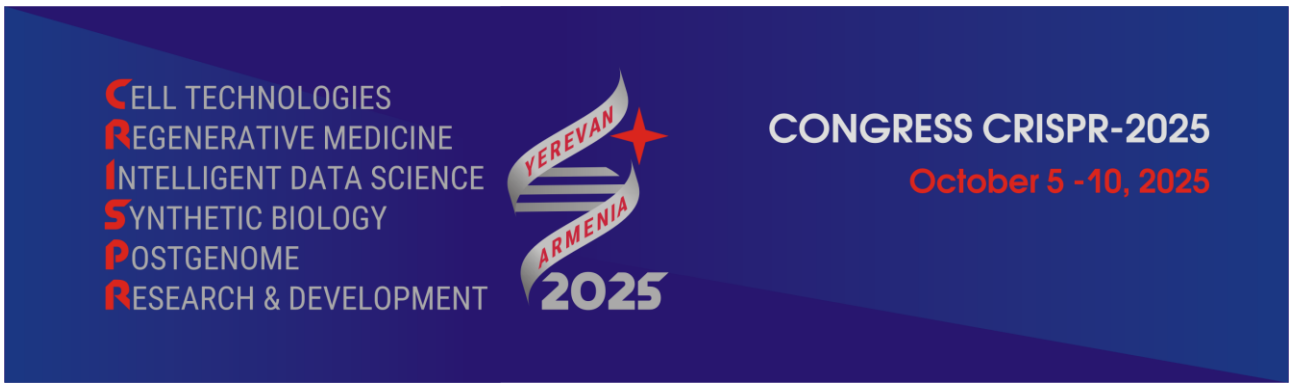
Я хочу от имени белорусских ученых, работающих в рамках научных направлений, рассматриваемых в рамках программы конгресса, искренне поздравить всех присутствующих с открытием конгресса и пожелать всем активной творческой работы. Благодаря ученым Института цитологии и генетики СО РАН в г. Новосибирске был проведен Первый Международный конгресс CRISPR, а сейчас это мероприятие из-за своей привлекательности и высокого научного уровня и звучания становится на постсоветском пространстве традиционным. Нет никакого сомнения в том, что и Третий Международный конгресс CRISPR также окажется успешным и послужит эффективным триггером для дальнейшего расширения исследований в нашей области биологической науки в ее тесном сопряжении с регенеративной медициной. К моему большому сожалению, я не смог по объективным причинам принять участия в конгрессе, но буду с нетерпением ждать появления его материалов. Искренне желаю всем больших успехов и удачи, новых знаний и оригинальных научных задач!!!

Академик НАН Беларуси,
Институт биофизики и клеточной инженерии
НАН Беларуси, И.Д. Волотовский
Минск

Уважаемые коллеги,
дорогие участники конференции «CRISPR-2025»,
примите мои самые искренние поздравления с участием в этой конференции!

Ваша работа на переднем крае науки, посвященная системе CRISPR/Cas, — это не просто научные исследования, это создание будущего медицины и новых биотехнологий. Желаю вам в эти дни плодотворной работы, ярких и содержательных дискуссий, установления новых профессиональных связей. Пусть ваши идеи находят отклик, а гипотезы — подтверждение. Пусть «CRISPR-2025» станет тем местом, где рождаются новые прорывные проекты и открываются новые горизонты в геномном редактировании. Желаю вам неиссякаемого энтузиазма, точности в экспериментах и грандиозных научных побед!

С уважением, Борис Скрябин.



Congress website - https://crispr2025.rau.am/

ORGANIZERS

- Institute of Cytology and Genetics, Siberian Branch of the Russian Academy of Sciences
- Russian-Armenian University
- Institute of Chemical Biology and Fundamental Medicine, Siberian Branch of the Russian Academy of Sciences
- Institute of Molecular Biology, National Academy of Sciences of the Republic of Armenia
- Surgut State University
- National Academy of Sciences of the Republic of Armenia

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YEREVAN ARMENIA 2025

INTERNATIONAL CONGRESS CRISPR-2025

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ВОГиС

ВАВИЛОВСКОЕ ОБЩЕСТВО ГЕНЕТИКОВ И СЕЛЕКЦИОНЕРОВ (ВОГиС)

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OCTOBER 5 -10, 2025

YEREVAN, ARMENIA

«CRISPR-2025»
SCIENTIFIC PROGRAM

October 5, Sunday	
17:00 – 20:00	**Arrival of participants** **Registration at the President Hotel**
October 6, Monday	
08:30 – 18:00	**Registration**
Hall №1	
09:30 – 10:00	**Opening of the Congress**
	Welcome speech by the congress organizers
Hall №1 **Plenary session** **Moderators: Suren M. Zakian, Arsen A. Arakelyan**	
10:00 – 10:40	**Sergey P. Medvedev** *Institute of Cytology and Genetics, Siberian Branch of the Russian Academy of Sciences, Novosibirsk, Russia* Generation and development of cell models of human neurodegenerative diseases using directed genome editing
10:40 – 11:20	**Denis V. Rebrikov** *Pirogov Russian National Research Medical University, Moscow, Russia* Clinical and legal issues of CRISPR-therapy of human germ line cells
11:20 – 12:00	**Egor R. Nikitin** *Novosibirsk State University, Institute of Cytology and Genetics, Siberian Branch of the Russian Academy of Sciences, Novosibirsk, Russia* Application of genome prime editing to create isogenic iPSC-based relevant models of human inherited diseases
12:00 – 12:30	**Coffee break**
Hall №1 **Plenary session** **Moderators: Olga I. Lavrik, Dmitry O. Zharkov**	
12:30 – 13:10	**Olga I. Lavrik** *Institute of Chemical Biology and Fundamental Medicine, Siberian Branch of the Russian Academy of Sciences, Novosibirsk, Russia* Poly(ADP-ribose) polymerases: role in genome stability and editing
13:10 – 13:50	**Dmitry O. Zharkov** *Institute of Chemical Biology and Fundamental Medicine, Siberian Branch of the Russian Academy of Sciences, Novosibirsk, Russia* Base editors: past, present, future
14:00 - 15:00	**Lunch**

Hall №1 **Panel Discussion** **“From AI-based drug prediction and precision genome editing to cell and gene therapy”** **(supported by the Foundation for Scientific and Technological Development of Yugra)**		
15:00 – 16:30	**Moderator – Roman A. Ivanov** *Sirius University of Science and Technology, Russia* - progress in editing tools and remaining technological limitations; - existing delivery systems for genetic editors and prospects for their development; - capabilities and limitations of bioinformatic approaches in the development of gene therapy drugs; - ethical aspects of genome editing; - regulatory aspects of the development and clinical use of drugs based on genetic editors; possibilities of individual production of gene therapy drugs; - commercial aspects of the use of gene therapy drugs; the readiness of the healthcare system to reimburse the costs of gene therapy; reimbursement mechanisms – best foreign practices; - complex aspects of interpreting genetic data: in search of the golden mean; - cellular products based on genetically modified iPSCs	
16:30 - 17:00	**Coffee break**	
Hall №1 **Plenary session** **Moderators: Rakhmetkazhy Bersimbay, Roksana Zakharyan**		
17:00 – 17:40	**Rakhmetkazhy Bersimbay** *Institute of Cell Biology and Biotechnology, L.N. Gumilyov Eurasian National University, Astana, Kazakhstan* MicroRNA and cell-free mitochondrial DNA as potential biomarkers of lung cancer	
17:40 – 18:20	**Marina A. Zenkova** *Institute of Chemical Biology and Fundamental Medicine, Siberian Branch of the Russian Academy of Sciences, Novosibirsk, Russia* How does a tumor cell respond to the shutdown of one or several pro-oncogenic microRNAs	
18:20 – 19:00	**Roksana Zakharyan** *Institute of Biomedicine and Pharmacy RAU, Yerevan, Armenia* Familial Mediterranean Fever - a promising target for gene therapy development	
October 7, Tuesday		
09:30 – 18:00	**Registration**	
09:30 – 17:40	**Hall №1** **Plenary session** **09:30 – 17:40**	**Hall №2** **Section 1** **“New approaches to the development of means of therapy, research and diagnostics of diseases”** **09:30 – 14:00**

		<u>Hall №2</u> **Section 2** **“Genetic technologies for medicine”** **15:00 – 17:40**
18:10 – 19:10	**POSTER SESSION**	
<u>Hall №1</u> **Plenary session** **Moderators:** **Arsen A. Arakelyan, Edouard Aboian,** **Elena A. Salina, Sergey K. Svitashev**		
09:30 – 10:10	**Arsen A. Arakelyan** *Institute of Biomedicine and Pharmacy RAU, Institute of Molecular Biology NAS, Yerevan, Armenia* The three musketeers – genomics, bioinformatics, genome editing, and AI	
10:10 – 10:50	**Hans Binder** *University of Leipzig, Armenian Bioinformatics Institute* Dr. Omics 2.0 – Novel Bioinformatics for Precision Oncology	
10:50 – 11:30	**Mariam Aboian** *Children's Hospital of Philadelphia, University of Pennsylvania, USA* Radiogenomics of brain tumors	
11:30 – 12:00	**Coffee break**	
12:00 – 12:30	**Anna A. Kostareva** *Almazov National Medical Research Centre, Saint Petersburg, Russia* Monogenic and polygenic factors in inherited cardiac disorders: unity and struggle	
12:30 – 12:50	**Illumina** CROP-seq - solution from Illumina for CRISPR screens	
12:50 – 13:20	**Elena V. Dementyeva** *Institute of Cytology and Genetics, Siberian Branch of the Russian Academy of Sciences, Novosibirsk, Russia* Cell and genome technologies in studying hypertrophic cardiomyopathy	
13:20 – 14:00	**Edouard Aboian** *Yale School of Medicine, New Haven, USA* Challenges in management of genetic aortopathy. Vascular Ehlers-Danlos syndrome (EDS)	
14:00 - 15:00	**Lunch**	
15:00 – 15:40	**Hayk Davtyan** *University of California, Irvine, USA* Leveraging CRISPR-Cas9 for neurodegenerative disease research	
15:40 – 16:20	**Elena A. Salina** *Institute of Cytology and Genetics, Siberian Branch of the Russian Academy of Sciences, Novosibirsk, Russia* Wheat target genes for CRISPR/Cas9 editing in the post-genomic era	

16:20 – 17:00	**Sergey Svitashev** *Corteva Agriscience, Johnston, USA* Genome editing for crop improvement
17:00 – 17:40	**Alexander V. Vershinin** *Institute of Molecular and Cellular Biology, Siberian Branch of the Russian Academy of Sciences, Novosibirsk, Russia* Centromeric DNA: the storage of genome "black matter" or determinant of centromere species identity?
17:40 – 18:10	**Coffee break**
18:10 – 19:10	**POSTER SESSION**
Hall №2 **Section 1** **"New approaches to the development of means of therapy, research and diagnostics of diseases"** **Moderators:** **Nariman F. Salakhutdinov, Sergey M. Deyev**	
09:30 – 10:10	Keynote speaker **Nariman F. Salakhutdinov** *N.N. Vorozhtsov Novosibirsk Institute of Organic Chemistry of Siberian Branch of the Russian Academy of Sciences, Novosibirsk, Russia* From molecule to drug
10:10 – 10:50	Keynote speaker **Sergey M. Deyev** *Shemyakin-Ovchinnikov Institute of Bioorganic Chemistry of the Russian Academy of Sciences, Moscow, Russia* New trends in oncotheranostics
10:50 – 11:30	Keynote speaker **Sofya N. Pchelina** *Petersburg Nuclear Physics Institute named by B.P. Konstantinov of National Research Center «Kurchatov Institute», Pavlov First Saint Petersburg State Medical University, Russia* Development of small neuroprotective molecules for the treatment of Parkinson's disease associated with mutations in the GBA1 gene: basic science and business
11:30 – 12:00	**Coffee break**
12:00 – 12:20	**Iuliia I. Pavlova** *Lopukhin Federal Research and Clinical Center of Physical-Chemical Medicine, Moscow, Russia* Superenhancer G-quadruplexes in transcription regulation
12:20 – 12:40	**Pavel A. Bobrovsky** *Lopukhin Federal Research and Clinical Center of Physical-Chemical Medicine of Federal Medical Biological Agency, Moscow, Russia* Expression system with deep transcriptional repression and CRISPR-Cas9-mediated activation

12:40 – 13:00	**Nadezhda A. Orlova** *K.G. Skryabin Institute of Bioengineering, Research Centre of Biotechnology RAS, Moscow, Russia* Engineering the secretory pathway in Chinese hamster ovary cells: beyond genome knockout
13:00 – 13:20	**Ivan I. Vorobiev** *Research Center of Biotechnology of the Russian Academy of Sciences, Moscow, Russia* Genome engineering of CHO cells by multiplex and sequential CRISPR modification: from apoptosis resistance to the production of afucosylated antibodies
13:20 – 13:40	**Maria M. Terehova** *Institute of Biophysics and Cell Engineering, NAS of Belarus, Minsk, Belarus* Amphiphilic dendrons as gene nanocarriers: study of cellular uptake
13:40 – 14:00	**Alesia I. Stanavaya** *Institute of Biophysics and Cell Engineering, NAS of Belarus, Minsk, Belarus* Delivery of complexes based on dendronized thiacalix[4]arenes and small RNAs into HeLa tumor cells
14:00 – 15:00	**Lunch**
<u>Hall №2</u> Section 2 “Genetic technologies for medicine” Moderators: Svetlana A. Smirnikhina, Andrey S. Glotov	
15:00 – 15:40	Keynote speaker **Svetlana A. Smirnikhina** *Research Centre of Medical Genetics, Russian Academy of Sciences, Moscow, Russia* Prime editing is the basis of modern gene therapy for cystic fibrosis
15:40 – 16:00	**Darina B. Sambour** *Almazov National Medical Research Center, Saint Petersburg, Russia* Plasma microRNA profiles in heart transplant recipients with acute rejection: a single-center cohort study
16:00 – 16:20	**Olga V. Kalinina** *Almazov National Medical Research Center, Saint Petersburg, Russia* Plasma cytokines patterns for non-invasive diagnostic of cardiac allograft rejection: a longitudinal biomarker study
16:20 – 16:40	**Anna A. Atsapkina** *D.O. Ott Research Institute of Obstetrics, Gynecology and Reproductology, Saint Petersburg, Russia* Early screening of Duchenne/Becker muscular dystrophy in the era of gene therapy: the St. Petersburg experience
16:40 – 17:00	**Andrey S. Glotov** *D.O. Ott Research Institute of Obstetrics, Gynecology and Reproductology, Saint Petersburg, Russia* Biobanks and genetic technologies: focus on the future family

17:00 – 17:20	**Pavel O. Bogomolov** *Moscow Regional Research and Clinical Institute, Russia* Current approaches and perspectives of treating liver cirrhosis patients	
17:40 – 18:10	**Coffee break**	
18:10 – 19:10	**POSTER SESSION**	
October 8, Wednesday		
09:30 – 18:00	**Registration**	
09:30 – 18:00	**<u>Hall №1</u> Section 3 "Cell technologies, tissue engineering and biofabrication" 09:30 – 16:00**	**<u>Hall №2</u> Section 4 "Gene therapy" 09:30 – 13:30**
	Educational section "Science and education on the way to effective biotechnologies" (supported by the Foundation for Scientific and Technological Development of Yugra) 16:30 – 18:00	**Section 5 "Creating and improving genome editing tools to treat human diseases" 15:00 – 17:40**
<u>Hall №1</u> Section 3 "Cell technologies, tissue engineering and biofabrication" Moderators: Yelena V. Parfyonova, Andrey A. Karpenko, Vladislav A. Parfenov, Irina S. Zakharova		
09:30 – 10:10	Keynote speaker **Yelena V. Parfyonova** *Chazov National Medical Research Centre of Cardiology, Moscow, Russia* New insight into mechanisms of regenerative processes in the heart: epicardium as a key regulator and promising target for regenerative technologies	
10:10 – 10:50	Keynote speaker **Vladislav A. Parfenov** *Research Institute of Technical Physics and Automation, Moscow, Russia* Biofabrication. Principles. Challenges. Prospects	

10:50 – 11:30	Keynote speaker **Andrey A. Karpenko** *Lopukhin Federal Research and Clinical Center of Physical-Chemical Medicine of Federal Medical Biological Agency, Moscow, Russia* Tissue-engineered vascular grafts. Development and application perspectives
11:30 – 12:00	**Coffee break**
12:00 – 12:20	**Pavel M. Docshin** *Almazov National Medical Research Centre, Saint Petersburg, Russia* Wnt/β-catenin activation attenuates osteogenic differentiation and inflammation in female aortic valve interstitial cells
12:20 – 12:40	**Anna M. Zlotina** *Almazov National Medical Research Centre, Saint Petersburg, Russia* Cardiac stromal cells as a model for investigation of molecular and cellular basis of congenital heart disease
12:40 – 13:00	**Yulia A. Nashchekina** *Ioffe Institute, Institute of Cytology, Russian Academy of Sciences, Saint Petersburg, Russia* Formation of collagen scaffolds with an oriented structure for corneal regeneration
13:00 – 13:20	**Vera S. Ovechkina** *Shemyakin-Ovchinnikov Institute of Bioorganic Chemistry, Pirogov Russian National Research Medical University, Moscow, Russia* Using TRPV1 channel-based thermogenetic tools to impose cardiac pacing
13:20 – 13:40	**Andrey A. Mozhaev** *Shemyakin-Ovchinnikov Institute of Bioorganic Chemistry, Pirogov Russian National Research Medical University, Federal Center of Brain Research and Neurotechnologies, Moscow, Russia* Development of a device for spatial fixation of the heart in vivo
13:40 – 14:00	**Anna G. Demchenko** *Research Centre for Medical Genetics, Moscow, Russia* Cellular models of respiratory epithelium for modelling and developing therapies for cystic fibrosis
14:00 - 15:00	**Lunch/“Illumina Day” - Lunch & Learn**
15:00 – 15:20	**Inna E. Pristyazhnyuk** *Institute of Cytology and Genetics, SB RAS, Novosibirsk, Russia; Novosibirsk State University, Novosibirsk, Russia; Sirius University of Science and Technology, Sirius, Russia* Analysis of intracellular abnormalities associated with Cohen syndrome in Phoenix cell line with mutations of *COH1* gene
15:20 – 15:40	**Olga A. Koval** *Institute of Chemical Biology and Fundamental Medicine, Siberian Branch of the Russian Academy of Sciences, Novosibirsk, Russia* Can ZEB1 be a prognostic factor for uveal melanoma?
15:40 – 16:00	**Aleksandra A. Maksimova** *Research Institute of Fundamental and Clinical Immunology, Novosibirsk, Russia* Antifibrotic potential of macrophage-derived conditioned media in modulation of the lung fibroblast activity
16:00 – 16:30	**Coffee break**

Hall №1 **Educational section** **“Science and education on the way to effective biotechnologies”** **(supported by the Foundation for Scientific and Technological Development of Yugra)** **Moderators:** **Pavel M. Gershovich, Roman A. Ivanov, Ludmila V. Kovalenko**	
16:30 – 18:00	**Roman A. Ivanov** *Sirius University of Science and Technology, Russia* Project-based educational conveyor in the master's programs of Sirius University: practice-oriented training of personnel **Dmitry O. Zharkov** *Institute of Chemical Biology and Fundamental Medicine, Siberian Branch of the Russian Academy of Sciences, Novosibirsk, Russia* Experience of creation, implementation and development of the master's program “Synthetic biology” at the Novosibirsk State University **Alina A. Grigoryeva** *BIOCAD, Saint Petersburg, Russia* Experience of interaction of “BIOCAD” with educational institutions **Rakhmetkazhy Bersimbay** *L.N. Gumilyov Eurasian National University, Astana, Kazakhstan* Experience of implementing educational programs in biology and biotechnology at the L.N. Gumilyov Eurasian National University together with the National Center for Biotechnology **Ludmila V. Kovalenko** *Surgut State University, Surgut, Russia* Scientific leaders training in Yugra: a step into the future together with the Center for High Biomedical Technologies **Irina V. Lyadova** *Pirogov Russian National Research Medical University, Moscow, Russia* Experience in the creation, implementation and development prospects of an educational program in the field of “Cell and gene therapy” **Vyacheslav L. Nekrasov** *Foundation for Scientific and Technological Development of Yugra* The Genomic Odyssey: How to tell the public that the biotech revolution is here
Hall №2 **Section 4** **“Gene therapy”** **Moderators:** **Pavel M. Gershovich, Roman V. Deev, Denis V. Rebrikov**	
09:30 – 10:10	Keynote speaker **Pavel M. Gershovich** *Biotechnology company BIOCAD, Saint Petersburg, Russia* AAV-based vector engineering

10:10 – 10:50	Keynote speaker **Roman V. Deev** *Research Institute of Human Morphology, Russian Scientific Center of Surgery named after Academician B.V. Petrovsky, Moscow, Russia* Methodological approaches to gene therapy of musculoskeletal system diseases
10:50 – 11:10	**Alexander V. Prokofyev** *Biotechnology company BIOCAD, The Saint Petersburg State Chemical and Pharmaceutical University, Saint-Petersburg, Russia* Gene therapy for Hemophilia B: Arvenacogene sanparvovec
11:10 – 11:30	**Mariya P. Perepelkina** *Biotechnology company BIOCAD, Saint Petersburg, Russia* Development of monoclonal AAV producer cell lines for the hemophilia B treatment
11:30 – 12:00	**Coffee break**
12:00 – 12:30	**Denis V. Rebrikov** *Pirogov Russian National Research Medical University, Moscow, Russia* Personalized gene therapy
12:30 – 12:50	**Iurii K. Slepov** *Neurogene Therapy LLC, Swiftgen LLC, Moscow, Russia* Investigation of the efficacy of genetic constructs encoding human neurotrophic factors in a mouse model of amyotrophic lateral sclerosis
12:50 – 13:10	**Irina Sorochanu** *Genotarget LLC, Skolkovo Innovation Center, Moscow, Russia* In vivo efficacy of AAV-based constructs for FKRP-associated myopathy
13:10 – 13:30	**Evgeniy D. Kopylov** *JSC "Histograft", Avtsyn Research Institute of Human Morphology of Federal State Budgetary Scientific Institution "Petrovsky National Research Centre of Surgery", Moscow, Russia* Screening of the anti-inflammatory effect of gene therapy in a mouse model of psoriasis
14:00 - 15:00	**Lunch/"Illumina Day" - Lunch & Learn**
Hall №2 **Section 5** **"Creating and improving genome editing tools to treat human diseases"** **Moderators:** **Andrey V. Kulbachinskiy, Sergey P. Medvedev**	
15:00 – 15:20	**Darya S. Novopashina** *Institute of Chemical Biology and Fundamental Medicine, Siberian Branch of the Russian Academy of Sciences, Novosibirsk, Russia* The regulation of CRISPR/Cas9 system on the guide RNA level
15:20 – 15:40	**Natalia A. Kruglova** *Institute of Gene Biology, Russian Academy of Sciences, Moscow, Russia* Efficient genome editing using AsCas12a-VLPs produced with Pol II-transcribed crRNA

15:40 – 16:00	**Elizaveta V. Kurshakova** *Research Centre for Medical Genetics, Moscow, Russia* Development of a treatment for Duchenne muscular dystrophy using exon 11-12 skipping in the dystrophin gene
16:00 – 16:30	**Coffee break**
16:30 – 16:50	**Nawar Sakr** *Federal Research Center for Innovator and Emerging Biomedical and Pharmaceutical Technologies, Moscow Institute of Physics and Technology, Moscow, Russia* AAV-CRISPR/Cas9-mediated gene knock-in therapy in a mouse model of 21-hydroxylase deficiency
16:50 – 17:20	**Andrey V. Kulbachinskiy** *Institute of Gene Biology, Russian Academy of Sciences, Moscow, Russia* Prokaryotic innate immunity systems: cellular functions and applications in biotechnology
17:20 – 17:40	**Olga V. Volodina** *Research Centre for Medical Genetics, Moscow, Russia* Modification of prime editing system using nucleases to enhance its efficiency

October 9, Thursday

09:30 – 17:20	**Registration**	
09:30 – 17:00	**Hall №1** **Section 6** **“Induced pluripotent stem cells in basic research, human disease modeling and regenerative medicine”** **09:30 – 16:40**	**Hall №2** **Section 7** **“Genome editing in disease modeling and drug discovery”** **09:30 – 14:00** **Hall №2** **Section 8** **“Plant Genome Editing”** **15:00 – 17:00**
Fourchette		

Hall №1
Section 6
“Induced pluripotent stem cells in basic research, human disease modeling and regenerative medicine”

Moderators:
Maria A. Lagarkova, Alexey N. Tomilin,
Elena V. Dementyeva, Alexander I. Shevchenko

09:30 – 10:10	Keynote speaker **Maria A. Lagarkova** *Lopukhin Federal Research and Clinical Center of Physical-Chemical Medicine of Federal Medical Biological Agency, Moscow, Russia* iPSC-based neurodevelopmental disease modeling
10:10 – 10:50	Keynote speaker **Anna B. Malashicheva** *Institute of Cytology, Russian Academy of Sciences, Saint Petersburg, Russia* Management of osteogenic differentiation using the Notch signaling pathway in search of therapy for cardiovascular calcification and bone defects
10:50 – 11:30	Keynote speaker **Alexey N. Tomilin** *Institute of Cytology, Russian Academy of Sciences, Saint Petersburg, Russia* Novel regulators of cellular pluripotency
11:30 – 12:00	**Alexander I. Shevchenko** *Institute of Cytology and Genetics, Siberian Branch of the Russian Academy of Sciences, Novosibirsk, Russia* Playing with X-chromosome epigenetics in human primed and naïve pluripotent stem cells
12:00 – 12:30	**Coffee break**
12:30 – 12:50	**Anna S. Tsimokha** *Institute of Cytology, Russian Academy of Sciences, Saint-Petersburg, Russia* Inactivation of the immunoproteasome leads to reduced efficiency of somatic cell reprogramming
12:50 – 13:10	**Daria K. Sherman** *Lopukhin Federal Research and Clinical Center of Physical-Chemical Medicine of Federal Medical Biological Agency, Moscow, Russia* NKG2D-MICA axis plays the pivotal role in NK-cell response to autologous fibroblast-like iPSC derivatives
13:10 – 13:30	**Elena V. Zagaynova** *Lopukhin Federal Research and Clinical Center of Physical-Chemical Medicine of Federal Medical Biological Agency, Moscow, Russia* Cell therapy of insulin deficiency based on iPSCs – β-cells and polymer capsule
13:30 – 13:50	**Irina V. Lyadova** *Koltzov Institute of Developmental Biology of the Russian Academy of Sciences, Pirogov Russian National Research Medical University, Moscow, Russia* Induced pluripotent stem cells in modeling hematopoiesis and immune-associated hereditary diseases
14:00 - 15:00	**Lunch**
15:00 – 15:20	**Elena V. Grigor'eva** *Institute of Cytology and Genetics, Siberian Branch of the Russian Academy of Sciences, Novosibirsk, Russia* Modeling neurodegenerative diseases using induced pluripotent stem cells and CRISPR/Cas9 editing technology
15:20 – 15:40	**Anastasia A. Malakhova** *Institute of Cytology and Genetics, Siberian Branch of the Russian Academy of Sciences, Novosibirsk, Russia* PARP1 activity in neurons differentiated from iPSCs of patients with Huntington's and Parkinson's disease

15:40 – 16:00	**Tatiana A. Shnaider** *Institute of Cytology and Genetics, Siberian Branch of the Russian Academy of Sciences, Novosibirsk, Russia* New role of the CNTN6 gene in early development of human cerebral cortex
16:00 – 16:20	**Anastasia S. Knyazeva** *Novosibirsk State University, Institute of Cytology and Genetics, Siberian Branch of the Russian Academy of Sciences, Novosibirsk, Russia* Role of HAR located in the CNTN6 gene during early stages of human brain development in vitro
16:20 – 16:40	**Diana A. Sorogina** *Institute of Cytology and Genetics, Siberian Branch of the Russian Academy of Sciences, Novosibirsk, Russia* The role of the GLUD2 c.1492T>G variant in mitochondrial dysfunction in neuronal derivatives of iPSCs from a Parkinson's disease patient
Fourchette	
Hall №2 **Section 7** **“Genome editing in disease modeling and drug discovery”** **Moderators:** **Sergey P. Medvedev, Dmitry Y. Guschin, Mikhail V. Shepelev**	
09:30 – 10:00	**Dmitry Y. Guschin** *Sirius University of Science and Technology, Sochi, Russia* Genome editing: from chromatin dynamics to precision therapeutics
10:00 – 10:20	**Valeria I. Akhmerova** *Institute of Cytology and Genetics, Siberian Branch of the Russian Academy of Sciences, Novosibirsk State University, Novosibirsk, Russia* CRISPR-AsCas12a-mediated genome editing of human induced pluripotent stem cells
10:20 – 10:40	**Nadezhda S. Dyrkheeva** *Institute of Chemical Biology and Fundamental Medicine, Siberian Branch of the Russian Academy of Sciences, Novosibirsk, Russia* Creation of a panel of mammalian cell lines with CRISPR/Cas9 knockout of DNA repair genes
10:40 – 11:00	**Maria Yu. Kordyukova** *Federal Center of Brain Research and Neurotechnology of the Federal Medical-Biological Agency of Russia, Moscow, Russia* Investigation of the glioblastoma stem-like cells resistance mechanisms to auranofin by the genome-wide knockout CRISPR screening
11:00 – 11:20	**Mikhail V. Shepelev** *Center for Precision Genome Editing and Genetic Technologies for Biomedicine, Institute of Gene Biology, Russian Academy of Sciences, Moscow, Russia* Targeted insertion of large DNA fragments into mammalian genome with site-specific integrase Bxb1

11:20 – 11:40	**Elena E. Rasova** *Institute of Biology of Komi Science Centre of the Ural Branch of the Russian Academy of Sciences, Syktyvkar, Russia* CRISPRa-mediated overexpression of SOD3 and GPX3 genes enhances the resistance of HEK293 and HeLa cells to oxidative stress
11:40 – 12:00	**Ilya O. Velegzhaninov** *Institute of Biology FRC Komi SC UB RAS, Syktyvkar, Russia; ITMO University, St. Petersburg, Russia* Functional genomics of cellular stress resistance using CRISPRa
12:00 – 12:30	**Coffee break**
12:30 – 13:00	**Marina S. Drutskaya** *Engelhardt Institute of Molecular Biology, Russian Academy of Sciences, Moscow, Russia* Mouse models for preclinical studies: from partial to complete humanization
13:00 – 13:20	**Larisa V. Smolyaninova** *Engelhardt Institute of Molecular Biology, Russian Academy of Sciences, Lomonosov MSU, Moscow, Russia* Caspase-2 knockout mice generated by using the CRISPR-Cas9 system
13:20 – 13:40	**Artemiy O. Kurishev** *Mental Health Research Center, Engelhardt Institute of Molecular Biology, Russian Academy of Sciences, Moscow, Russia* ZNF536 dysfunction in neuronal development: A CRISPR/Cas9-based investigation of schizophrenia risk gene function
13:40 – 14:00	**Maxim N. Karagyaur** *Institute of Regenerative Medicine, Medical Research and Education Center, Lomonosov Moscow State University, Moscow, Russia* Identification of genomic variants of brain morphogenetic factors associated with the development of mental and cognitive disorders
14:00 - 15:00	**Lunch**
<u>Hall №2</u> Section 8 “Plant Genome Editing” Moderators: Elena A. Salina, Sergey K. Svitashev, Alexander V. Vershinin	
15:00 – 15:20	**Marina V. Dmitrieva** *Moscow Institute of Physics and Technology, Dolgoprudny, Russia* Nicotiana benthamiana “virus factory” obtainment via TSWV-based VIGE
15:20 – 15:40	**Antonina A. Kiseleva** *Institute of Cytology and Genetics, SB RAS, Kurchatov Genomic Center of the Institute of Cytology and Genetics, SB RAS, Novosibirsk, Russia* Enhancing elite wheat variety adaptability using genome editing
15:40 – 16:00	**Elena V. Mikhaylova** *Institute of Biochemistry and Genetics UFRC RAS, Ufa State Petroleum University, Ufa University of Science and Technology, Ufa, Russia* Exploring viral platforms for CRISPR/Cas delivery in crops

16:00 – 16:20	**Oksana L. Razhina** *All-Russia Research Institute of Agricultural Biotechnology, Moscow, Russia* How to increase potato resistance to PVY? And why we need tobacco for it	
16:20 – 16:40	**Elina S. Surkova** *Institute of Molecular and Cell Biology, Siberian Branch of the Russian Academy of Sciences, Novosibirsk State University, Novosibirsk, Russia* Selective NIR-activated gene expression in plants: optimizing BphP1-QPAS1 with an AsLOV2 degron	
16:40 – 17:00	**Ekaterina M. Timonova** *Institute of Cytology and Genetics, SB RAS, Kurchatov Genomic Center of the Institute of Cytology and Genetics, SB RAS, Novosibirsk, Russia* Enhancing transformation and genome editing efficiency of commercial barley cultivars using the GRF4-GIF1 chimera	
Fourchette		
October 10, Friday		
09:30 – 12:30	**Hall №1** **Section 9** **“Artificial Intelligence in Modern Biotechnology”** **09:30 – 12:30**	**Hall №2** **Section 10** **“Extracellular vesicles in disease research and modeling”** **09:30 – 10:50** **Hall №2** **Section 11** **“Microorganisms”** **10:50 – 12:10**
13:00 – 14:00	**Summing up the results of the competition for young scientists' reports.** **Summing up the results of the poster competition.** **Closing of the congress.**	
Hall №1 **Section 9** **“Artificial Intelligence in Modern Biotechnology”** **Moderators:** **Arsen A. Arakelyan, Yuri V. Vyatkin**		
09:30 – 10:10	Keynote speaker **Yuri V. Vyatkin** *Artificial Intelligence Institute of Lomonosov Moscow State University, Chief Innovation Officer at NOVEL, Russia* Artificial Intelligence as a Driving Force of Biotechnology Transformation	

10:10 – 10:30	**Nikolay S. Popov** *Research Institute for Systems Biology and Medicine of Rospotrebnadzor, Martsinovsky Institute of Medical Parasitology, Tropical and Vector Borne Diseases, Sechenov First Moscow State Medical University, Moscow, Russia* Application of LLMs for detecting spreading microorganisms in metagenomic data
10:30 – 10:50	**Ivan A. Pyankov** *Institute of Chemistry, St. Petersburg State University, Saint Petersburg, Russia* A machine learning-based approach for determining the impact of missense mutations on the risk of hereditary transthyretin cardiomyopathy
10:50 – 11:10	**Nelly S. Babayan** *Institute of Biomedicine and Pharmacy RAU, Institute of Molecular Biology NAS, Yerevan, Armenia* Application of Artificial Intelligence and machine learning to investigate the cellular interactome
11:10 – 11:30	**Suren Davitavyan** *Institute of Biomedicine and Pharmacy RAU, Institute of Molecular Biology NAS, Yerevan, Armenia* Multi-omics characterization of molecular diversity of breast cancer and glioma
11:30 – 11:50	**Siras Hakobyan** *Institute of Biomedicine and Pharmacy RAU, Institute of Molecular Biology NAS, Yerevan, Armenia* Topology-aware pathway analysis of spatial transcriptomes
11:50 – 12:10	**Ekaterina E. Markelova** *MSU Institute for Artificial Intelligence, Lomonosov Moscow State University, Moscow, Russia* How to predict cell response to drugs using transcriptome data
12:10 – 12:30	**Polina E. Karitskaia** *Novosibirsk State University, Novosibirsk, Russia* Artificial Intelligence for predicting chromosomal rearrangements in cancer genomes
12:30 – 13:00	**Coffee break**
13:00 – 14:00	**Summing up the results of the competition for young scientists' reports.** **Summing up the results of the poster competition.** **Closing of the congress.**
<u>Hall №2</u> Section 10 "Extracellular vesicles in disease research and modeling" Moderators: Sofia V. Pavlova, Elena V. Grigor'eva	
09:30 – 09:50	**Arthur D. Aquino** *Almazov National Medical Research Center, Saint Petersburg, Russia* Flow cytometry as a tool for extracellular vesicles phenotyping in immune diseases
09:50 – 10:10	**Nataliya A. Basalova** *Medical Research and Educational Institute, Lomonosov MSU, Moscow, Russia* Targeted modification of MSC extracellular vesicles to direct stromal cell differentiation

10:10 – 10:30	**Alexey S. Golovkin** *Almazov National Medical Research Centre, Saint Petersburg, Russia* Plasma extracellular vesicles of different cell origin in cardiac surgery
10:30 – 10:50	**Natalia V. Goncharova** *Republican Scientific and Practical Center of Transfusiology and Medical Biotechnologies, Minsk, Belarus* Circulating endothelial and platelet microvesicles as an assessment criterion of the cerebral microcirculatory bed endothelium integrity
<u>Hall №2</u> Section 11 "Microorganisms" Moderators: Andrey V. Kulbachinskiy, Darya S. Novopashina	
10:50 – 11:10	**Irina V. Safenkova** *A.N. Bach Institute of Biochemistry, Research Centre of Biotechnology of the Russian Academy of Sciences, Moscow, Russia* Application of lateral flow test strips in CRISPR/Cas amplification-based systems for rapid equipment free detection of pathogenic microorganisms
11:10 – 11:30	**Dmitry N. Konanov** *Research Institute for System Biology and Medicine of Rospotrebnadzor, Moscow, Russia* The role of genome rearrangements in the formation of the ADBAC-resistant phenotype of *Klebsiella pneumonia*
11:30 – 11:50	**Danil V. Krivonos** *Research Institute for System Biology and Medicine of Rospotrebnadzor, Moscow, Russia; Moscow Institute of Physics and Technology, Dolgoprudny, Russia* Antiviral defense systems in *Porphyromonas gingivalis*
11:50 – 12:10	**Anna A. Deeva** *Siberian Federal University, Krasnoyarsk, Russia; Surgut State University, Surgut, Russia* Exploring aldehyde chain length selectivity in bacterial luciferases
12:30 – 13:00	**Coffee break**
13:00 – 14:00	**Summing up the results of the competition for young scientists' reports.** **Summing up the results of the poster competition.** **Closing of the congress.**

POSTER SESSION

A 1	**Potential of modified catalytically inactive Cas9 endonucleases for intravital imaging of DNA loci**	G.A. Abushinova[1], V.V. Zherdeva[2], L.G. Maloshenok[1]	[1] *Institute of General Genetics, RAS, Moscow, Russia* [2] *Federal Research Center "Fundamentals of Biotechnology" of the RAS, Moscow, Russia*
A 2	**Development of a system for evaluating genome editing accuracy based on mutagenesis in the rpoB gene of Escherichia coli**	M.M. Amanova[1], I.P. Vokhtantsev[1], D.O. Zharkov[1]	[1] *Institute of Chemical Biology and Fundamental Medicine, SB RAS, Novosibirsk, Russia*
A 3	**Application of the CRISPR/Cas9 system for the generation of reporter plasmids and the investigation of 8-oxoguanine–induced mutagenesis *in vitro* and *in vivo***	M.S. Chuprikova[1], A.V. Yudkina[1], D.O. Zharkov[1, 2]	[1] *Institute of Chemical Biology and Fundamental Medicine, SB RAS, Novosibirsk, Russia* [2] *Novosibirsk State University, Novosibirsk, Russia*
A 4	**Medical geneticist as a link between the patient and molecular therapy of hereditary diseases**	N.M. Dvoynova[1]	[1] *D.O. Ott Research Institute of Obstetrics, Gynecology and Reproductology, Saint Petersburg, Russia*
A 5	***In vitro* characterization of a novel type II CRISPR-Cas system KiCas9**	M.S. Liashchenko[1], A.A. Vasileva[2], D.A. Kretov[2], M.V. Abramova[2], T.A. Zair-Bek[2], M.A. Khodorkovskii[2], A.N. Arseniev[2]	[1] *Saint Petersburg State University, St. Petersburg, Russia* [2] *Peter the Great St. Petersburg Polytechnic University, St. Petersburg, Russia*
A 6	**Evaluation of CRISPR–Cas9-Based Strategies for Cellular Imaging Using Fluorogenic Probes**	L.G. Maloshenok[1], G.A. Abushinova[1], I.A. Abdeeva[1], E.M. Vassina[3], V.V. Zherdeva[2]	[1] *Institute of General Genetics, RAS, Moscow, Russia* [2] *Federal Research Center "Fundamentals of Biotechnology" of the RAS, Moscow, Russia* [3] *Lopukhin Federal Research and Clinical Center of Physical-Chemical Medicine, Moscow, Russia*
A 7	**Fluorescence-based method for quantitative assessment and optimization of dCas–**	N.Yu. Mamaeva[1], P.G. Feskin[1], V.A. Yakovlev[1], A.K. Shaytan[1, 2]	[1] *Lomonosov Moscow State University, Moscow, Russia* [2] *Institute of Gene Biology, Moscow, Russia*

	gRNA–DNA complex binding		
A 8	**Development of cell lines for recombinant protein production using CRISPR/Cas9-mediated activation of endogenous growth factors**	V.A. Manuvera[1], P.A. Bobrovsky[1], E.N. Grafskaia[1], D.D. Kharlampieva[1], V.N. Lazarev[1]	[1] *Lopukhin Federal Research and Clinical Center of Physical-Chemical Medicine of Federal Medical Biological Agency, Moscow, Russia*
A 9	**Construction of a vector for gRNA synthesis from a supercoiled plasmid and its validation by in vitro CRISPR/Cas9 editing**	D.N. Pozdeev[1, 3], E.A. Khusnutdinov [1], M.P. Terekhov[1, 2], E.V. Mikhaylova[1, 2, 3]	[1] *Institute of Biochemistry and Genetics, UFRC RAS, Ufa, Russia* [2] *Ufa State Petroleum University, Ufa, Russia* [3] *Ufa University of Science and Technology, Ufa, Russia*
A 10	**Mass Photometry for CRISPR/Cas9 system complex research**	L.V. Sakovina[1, 2], A.V. Endutkin[1], D.S. Novopashina[1, 2], D.O. Zharkov[1, 2]	[1] *Institute of Chemical Biology and Fundamental Medicine, SB RAS, Novosibirsk, Russia* [2] *Novosibirsk State University, SB RAS, Novosibirsk, Russia*
A 11	**Cas12f1 Nuclease: A Versatile Platform for Targeted Genomic Integrations**	A.D. Zolotarenko [1], V.V. Sheptiy[1], S.A. Bruskin[1]	[1] *Vavilov Institute of General Genetics, RAS, Moscow, Russia*
A 12	**Screening of GPI-anchored 2P23 peptide library identified new anti-HIV peptide fusion inhibitors**	S.E. Borovikova[1], E.A. Tiukacheva[1], A.V. Luzhin[1], S.V. Ulianov[1], D.V. Mazurov[2], M.V. Shepelev[1], N.A. Kruglova[1]	[1] *Institute of Gene Biology, Russian Academy of Sciences, Moscow, Russia* [2] *Yale School of Medicine, New Haven, USA*
A 13	**Using bacterial Argonaute to study transcription-replication conflicts**	B.K. Godneeva[1], V.A. Panteleev[1], A.V. Kulbachinskiy[1], D.M. Gelfenbein[1]	[1] *Institute of Gene Biology, RAS, Moscow, Russia*
A 14	**Analysis of a Cas4-like nuclease associated with the Argonaute protein from a mesophilic bacterium**	L.A. Lisitskaya[1], M.K. Alieva[1], V.A. Panteleev[1], D.M. Gelfenbein[1], A.V. Kulbachinskiy[1]	[1] *Institute of Gene Biology, RAS, Moscow, Russia*
A 15	**Interaction of Argonaute proteins with phosphorothioation restriction-modification systems during phage infection**	V.A. Panteleev[1], B.K. Godneeva[1]*, D.M. Gelfenbein[1], A.V. Kulbachinskiy[1]	[1] *Institute of Gene Biology, RAS, Moscow, Russia*
A 16	**Mitochondrial genome manipulation using a**	B.A. Rimskaya[1, 2, 4], E.V. Kropocheva[2, 3],	[1] *Moscow Institute of Physics and Technology*

	programmable pAgo nuclease	E.I. Shchukina[2], A.V. Kulbachinskiy[3], I.O. Mazunin[2, 4]	*(National Research University), Dolgoprudny, Russia* [2] *Center for Molecular and Cellular Biology, Skolkovo Institute of Science and Technology, Moscow, Russia* [3] *Institute of Gene Biology, Russian Academy of Sciences, Moscow, Russia* [4] *Petrovsky Medical University, Moscow, Russia*
A 17	**Using CRISPR Activation systems for the development of antiviral drugs**	I.V. Karandashov[1, 2], A.P. Kostyusheva[1], S.A. Brezgin[1, 2], A.S. Frolova[1], A.S. Tikhonov[1], V.V. Volodin[1], A.V. Kachanov[1], I.A. Goptar[1], Yu.A. Duvanova[1], A.N. Lukashev[1], N.F. Zakirova[2], A.V. Ivanov[2], V.P. Chulanov[1, 2], D.S. Kostyushev[1, 2]	[1] *Martsinovsky Institute of Medical Parasitology, Tropical and Vector-Borne Diseases, Sechenov University, Moscow, Russia* [2] *Engelhardt Institute of Molecular Biology, Russian Academy of Science, Moscow, Russia*
A 18	***In vitro* cleavage assay for the detection of chromosomal rearrangements in clinical samples using Cas12a nuclease**	V.V. Sheptiy[1], A.D. Zolotarenko [1], S.A. Bruskin[1]	[1] *Vavilov Institute of General Genetics, RAS, Moscow, Russia*
B 1	**Editing of carbonic anhydrase genes of α-family from *Arabidopsis thaliana* using endonuclease Cas9**	N.V. Permyakova[1], N.N. Rudenko[2], L.K. Ignatova[2], E.M. Nadeeva[2], D.V. Vetoshkina[2], M.A. Kozuleva[2], B.N. Ivanov[2]	[1] *Institute of Cytology and Genetics, SB RAS, Novosibirsk, Russia* [2] *Institute of Basic Biological Problems, FRC PSCBR RAS, Pushchino, Russia*
B 2	**Optimization of adeno-associated viral vector-mediated transgene delivery in human induced pluripotent stem cell-derived cardiomyocytes from phenotypically normal donors**	S.K. Andrianova[1, 2], V.S. Ovechkina[1, 3], V.V. Belousov[1, 3, 4], A.A. Mozhaev[1, 2, 3, 4]	[1] *Shemyakin-Ovchinnikov Institute of Bioorganic Chemistry, Moscow, Russia* [2] *National Research University Higher School of Economics, Moscow, Russia* [3] *Pirogov Russian National Research Medical*

			University, Moscow, Russia [4] *Federal Center of Brain Research and Neurotechnologies, Moscow, Russia*
B 3	**Human definitive endoderm-based in vitro model for studying the pathogenesis of Wilson Disease**	M.A. Berestovoy[1, 2], V.D. Starodubova[2], E.V. Karpukhina[1], A.S. Baranova[2], A.V. Ivanenko[1], A.G. Shokhina[1, 2]	[1] *Federal Center of Brain Research and Neurotechnologies, Federal Medical Biological Agency, Moscow, Russia* [2] *Pirogov Russian National Research Medical University, Moscow, Russia*
B 4	**Modern approaches to engineering human reporter cell lines using CRISPR within Safe Harbor loci and endogenous genes**	A.G. Bykonya[1], D.Y. Guschin[1], N.A. Barlev[2], A.V. Zvyagin[1]	[1] *Sirius University of Science and Technology, Sochi, Russia* [2] *School of Medicine, Nazarbayev University, Astana, Kazakhstan*
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B 6	**Micronuclei levels in doxorubicin- and mitomycin C-treated MRC-5 and HeLa cells with knockdown of the histone *H1-5* gene**	T. Harutyunyan[1, 2], A. Sargsyan[1, 2], G. Tadevosyan[3], L. Kalashyan[1], R. Aroutiounian[1, 2], G. Hovhannisyan[1, 2]	[1] *Research Institute of Biology, Yerevan State University, Yerevan, Armenia* [2] *Department of Genetics and Cytology, Yerevan State University, Yerevan, Armenia* [3] *Institute of Molecular Biology, NAS RA, Yerevan, Armenia*
B 7	***UBE2A* knock-out changes cell motility and proliferation in neurogenesis**	R.V. Mironov[1], A.O. Kustova[2], E.V. Yemets[1], A.D. Ulyanov[1], E.V. Kondakova[2], V.S. Tarabykin[2], A.N. Bogomazova[1], M.A. Lagarkova[1]	[1] *Lopukhin Federal Research and Clinical Center of Physical-Chemical Medicine of Federal Medical Biological Agency, Moscow, Russia* [2] *Institute of Neuroscience, National Research Lobachevsky State University of Nizhny Novgorod, Nizhny Novgorod, Russia*
B 8	**Effect of PPARd receptor agonists on the**	S.V. Pavlova[1, 2], D.A. Sorogina[1], A.E. Shulgina[1],	[1] *Institute of Cytology and Genetics, SB RAS, Novosibirsk, Russia*

	metabolism of iPSC-derived cardiomyocytes	S.M. Zakian[1, 2], E.V. Dementyeva[1, 2]	[2] *Institute of Chemical Biology and Fundamental Medicine, SB RAS, Novosibirsk, Russia*
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	specific *FLNC* c.7416_7418delGAA mutation linked to restrictive cardiomyopathy	A.V. Deykin[3], T.V. Egorova[1, 2], M.V. Bardina[1, 2]	[2] *Marlin Biotech, Sochi, Russia* [3] *Joint Center for Genetic Technologies, Belgorod National Research University, Belgorod, Russia*
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