



## PROGRAM OF THE INTERNATIONAL CONFERENCE

### "Perspective technologies in vaccination and immunotherapy"

[www.onlinereg.ru/TECHVAC2018](http://www.onlinereg.ru/TECHVAC2018)

#### Day 1, Friday October 5, 2018

**Venue:** Hotel "Spectr Khamovniki" Hotel Spektr Usacheva Street 35 Bld.1, <http://eng.spektr-hotel.ru/>

12.00 Opening of the Conference. Prof Ishmukhametov, the Director of the Chumakov Federal Scientific Center for Research and Development of Immune-and-Biological Products of Russian Academy of Sciences, Moscow, Russia

12.15-13.00 **OPENING LECTURE** Anne-Sophie Beignon (*CEA, Paris, France*) Vaccine-induced innate and adaptive immune memory responses

#### **SESSION I. VACCINE RESEARCH, OLD FOES, NEW TOOLS**

13.10-13.50 **PLENARY 1** Franco Buonaguro (*Institute of Cancer, Naples, Italy*) Advances of vaccines against chronic viral infections and cancer.

13.50-14.30 Andrei Kozlov (*Biomedical Center, Peter the Great St. Petersburg Polytechnic University, Saint Petersburg, St. Petersburg, Russia*) Novel tumor associated antigens as targets for immunotherapy of cancer

14.30-15.00 Joon Rhee (*Chonnam National University Medical School, and Clinical Vaccine R&D Center, Chonnam, South Korea*) Combinatorial tumor immunotherapy

#### **15.00-15.30 Coffee break**

15.30-16.10 Mikhail Mikhailov (*Mechnikov Research Institute for vaccines and sera; Medical Academy for continuous professional education, Moscow, Russia*) Novel strategy for universal vaccination against hepatitis B (with translation)

#### **SESSION II. VACCINE MODALITIES AND VEHICLES**

16.10-16.40 Andrey Vasin (*Smorodintsev Research Institute of Influenza Ministry of Health of the Russian Federation; Peter the Great St-Petersburg Polytechnic University, St. Petersburg, Russia*) Universal recombinant and influenza virus-based vector vaccines for respiratory infections

16.40-17.10 Ed Rybicki (*Biopharming Research Unit, Molecular & Cell Biology Department, University of Cape Town, South Africa*) Plant-made vaccines and biologics and the One Health Initiative

17.10-17.30 Anastasia Latanova (*Engelhardt Institute of Molecular Biology, and Gamaleya Research Center for Epidemiology, and Microbiology, Moscow, Russia*) Electroporation, a magic wand in DNA vaccination

17.30-17.50 Juris Jansons (*Riga Stradins University, and Latvian Biomedical Research and Study Center, Riga, Latvia*) Virus-like particles in vaccine applications

**18.00 Welcome mingle at Business hotel “Spectr Khamovniki” (invitation tickets)**

## **Day 2, Saturday October 6, 2018**

**Venue: Chumakov Federal Scientific Center for Research and Development of Immune-and-Biological Products of Russian Academy of Sciences, Moscow, settlement Moskovsky, poselok “Institute of poliomyelitis”, building block 8 <http://www.chumakovs.ru/contacts>**

**Departure with our bus from hotel “Yunost” metro Sportivnaya to Chumakov Federal Scientific Center for Research and Development of Immune-and-Biological Products of Russian Academy of Sciences. Please, come in advance. Buss will live at 08.00 sharp. ALL PARTICIPANTS ARE KINDLY REQUESTED TO TAKE THEIR PASSPORTS TO GET ACCESS TO CHUMAKOV CENTER. NO PASSPORT, NO ACCESS!!!**

**09.00 Arrival, welcome coffee**

### **SESSION III DEVELOPMENT OF VIRAL VACCINES**

09.30-10.00 **PLENARY 2** Margaret Liu (*ProTherImmune; University of California, San Francisco, USA; Karolinska Institutet, Stockholm, Sweden*) Principles and perspectives of naked RNA vaccination

10.00-10.40 Georgy Ignatyev (*Chumakov Federal Scientific Center for Research and Development of Immune-and-Biological Products of Russian Academy of Sciences, and Joint-Stock Company «Microgen», Moscow Moscow, Russia*). Molecular biology methods for the quality control of viral vaccines (with translation)

10.40-11.10 Alevtina Nikolaeva (*AO NPO “Microgen”, Moscow, Russia*) Efficiency and safety of new domestic combined vaccines to prevent pertussis, diphtheria, tetanus, hepatitis B and hib-infection

11.10-11.30 Pinayeva Anastasia (*Chumakov Federal Scientific Center for Research and Development of Immune-and-Biological Products of Russian Academy of Sciences, Moscow, Russia*). Development of inactivated polio vaccine based on Sabin stains

11.30-11.50 Kovpak Anastasia (*Chumakov Federal Scientific Center for Research and Development of Immune-and-Biological Products of Russian Academy of Sciences, Moscow, Russia*) Selection of single domain antibodies by using phage display: an effective pipeline for developing D-antigen measuring ELISA system in S-IPV vaccine

**12.00-13.00 Lunch (Mu-Mu)**

### **SESSION III (continued) DEVELOPMENT OF VIRAL VACCINES**

13.00-13.30 Kozlovskaya Lubov (*Chumakov Federal Scientific Center for Research and Development of Immune-and-Biological Products of Russian Academy of Sciences, Moscow, Russia*). Vaccine-associated paralytic poliomyelitis in Russia in 1998-2014

13.30-14.00 Karen Kyuregyan (*Mechnikov Research Institute for vaccines and sera; Medical Academy for continuous professional education, Moscow, Russia*) Universal single-dose vaccination against hepatitis A in children in region with intermediate endemicity

14.00-14.15 Nikonova Alena (*Gamaleya Research Center for Epidemiology, and Microbiology, Moscow, Russia*) Construction and immunogenicity of recombinant adenovirus serotype 5, carrying gene of glycoprotein of the rabies strain RV 97

14.15-14.30 Elizaveta Starodubova (*Engelhard institute of molecular biology, Moscow, Russia*) Impact of NS1 protein of TBEV on gene expression in the cells and on the development of immune response in mice

#### **14.30-15.00 Coffee break**

### **SESSION III (continued) DEVELOPMENT OF VIRAL VACCINES**

**15.00-15.40 PLENARY 3** Shan Lu (*University of Massachusetts Medical School, USA*) DNA immunization: current status of its development as a human vaccination technology, focus on viral vaccines

15.40-16.00 Andrei Kozlov (*State Research Institute of Highly Pure Biopreparations, Saint Petersburg, Russia*) Development and clinical trials of HIV DNA vaccine

16.00-16.20 Stefan Petkov (*Department of Microbiology, Tumor and Cell Biology, Karolinska Institutet, Stockholm, Sweden*) Phenotypic analysis of CD4+ T helper cells in HIV DNA-immunized mice

16.20-16.40 Ekaterina Pankova (*Gamalyea National Research Center of Epidemiology and Microbiology; Chumakov Federal Scientific Center for Research and Development of Immune-and-Biological Products of Russian Academy of Sciences, Moscow, Russia*) DNA immunization with HIV clade A RT restricts growth of highly aggressive RT- expressing adenocarcinomas in a mouse model

**17.00 Departure with the buss to hotel "Yunost"\***

**19.00 Dinner Restaurant VISOTSKY <http://club-vysotsky.ru/>, Visotsky street, building 3 (by invitation) \*Buss takes participants to the hotel "Yunost", and from there to the restaurant.**

## Day 3, Sunday October 7, 2018

**Departure 08.00 from hotel "Yunost" metro Sportivnaya; busses to Chumakov Federal Scientific Center for Research and Development of Immune-and-Biological Products of Russian Academy of Sciences. Please, come in advance. Buss will live at 08.00 sharp. ALL PARTICIPANTS ARE KINDLY REQUESTED TO TAKE THEIR PASSPORTS TO GET ACCESS TO CHUMAKOV CENTER. NO PASSPORT, NO ACCESS!!!**

**09.00 Arrival, coffee**

### SESSION IV ADJUVANTS, CARRIERS AND IMMUNOMODULATORS

09.30-10.10 **PLENARY 4** Petr Aparin (*Institute of Immunology RAN, Moscow, Russia*) Clinical investigations of vaccines including adjuvant compound

10.10-10.40 Vitaly Zverev (*Mechnikov Research Institute for Vaccines and Sera, Moscow, Russia*) Toll-Like Receptor agonists and their combinations as therapeutic vaccine components

10.40-11.10 Amir Tukhvatulin & Denis Logunov (*Gamaleya National Research Center for Epidemiology and Microbiology, Moscow, Russia*) The biological significance of collaboration between pattern-recognition receptors of innate immunity

11.10-11.40 Volha Dzmitruk (*Institute of Biophysics and Cell Engineering NASB, Minsk, Belarus*) Dendrimers for DNA vaccine delivery

**11.40-12.40 Lunch ("Mu-Mu")**

### SESSION IV (continued) ADJUVANTS, CARRIERS AND IMMUNOMODULATORS IN CANCER THERAPY & IMMUNOTHERAPY

12.40-13.20 **PLENARY 5** Margaret Liu (*ProTherImmune; University of California, San Francisco, USA; Karolinska Institutet, Stockholm, Sweden*) Cancer vaccines and immunotherapeutics: prospects and challenges

13.20-13.40 Maksim Ionov & Maria Bryszewska (*Lodz University, Lodz, Poland*) Electroporation or nanotechnology? Efficient ways of gene delivery in anticancer therapy

13.40-14.00 Sylwia Michlewska (*Lodz University, Lodz, Poland*) Carbosilane ruthenium dendrimers as a candidates for controlled delivery and diagnostic imaging in anticancer therapy

**14.00-14.20 Coffee break**

### POSTER SESSION

**Posters are presented as 5-min talks with illustration using Power Point or PDF file on the screen. Two minutes will be left for questions after each talk. Best poster presentation by the young researcher will be awarded by an independent jury formed by the Program Committee.**

14.20-14.30 Alica Kurlanda (*Riga Stradins University, Riga, Latvia*) DNA immunization with rat telomerase reverse transcriptase induces effector immune response in BALB/c mice

14.30-14.40 Elizaveta Starodubova & Olesja Eliseeva (*Gamaleja National Research Center for Epidemiology and Microbiology, Moscow, Russia; Karolinska Institutet, Stockholm, Sweden*) Rat telomerase reverse transcriptase, prokaryotic expression and humoral immunogenicity in rabbits

14.40-14.50 Alexey Baldin (I.M. Sechenov First Moscow State Medical University) Autoantibody against visual arrestin as a potential biomarker of renal cell carcinoma

14.50-15.00 Ozharovskaia Tatiana (*Gamaleja National Research Center for Epidemiology and Microbiology, Moscow, Russia*) Comparative analysis of biodistribution of adenoviral vectors subgroups C, D and E in Syrian hamsters

15.00-15.10 Karen Kyuregyan & Anastasia Karlsen (*Mechnikov Research Institute for Vaccines and Sera, Gamaleja National Research Center for Epidemiology and Microbiology, Moscow, Russia*) Prevalence of immune escape and drug-resistant hepatitis B virus variants 10 and 20 years after implementation of universal vaccination and first nucleoside analogue

**15.30 Departure with the busses to hotel "Yunost" Metro Sportivnaya**

*Two-hour Moscow sight-seeing by bus with the English-speaking guide will be organized upon request. Excursion will start from hotel "Yunost" October 7, 2018 at 16.30. All interested are invited to sign in with meeting manager Ekaterina Afanasieva [TECHVAC2018@onlinereg.ru](mailto:TECHVAC2018@onlinereg.ru), the latest October 1, 2018. Cost of excursion is 20 euro to be paid in cash at the conference registration desk October 5 to October 7. Excursion will be organized if 10 or more guests sign in. If the number of attendants is less, you can still go if you agree with a higher fee. Not attended excursion will not be refunded.*

**Day 4, October 8, 2018**

**Venue: Business Hotel "Spectr Khamovniki" Hotel Spektr Usacheva Street 35 Bld.1, Moscow**

**SESSION V. SYNTHETIC VACCINOLOGY & TECHNOLOGIES ASSISTING VACCINE DESIGN**

09.00-09.30 Valery Ilinsky (*Genotek Ltd, and Orekhovich Institute of Biomedical Chemistry Moscow, Russia*) Perspectives and applications of NGS technologies for vaccine research

09.30-10.00 Dmitriy Osolodkin (*Chumakov Federal Scientific Center for Research and Development of Immune-and-Biological Products of Russian Academy of Sciences, Moscow, Russia*). Well-curated data on antiviral activity for small molecules

10.00-10.20 Vijay Kumar Prajapati (*Department of Biochemistry, School of Life Sciences, Central University of Rajasthan, Ajmer, Rajasthan, India*) Novel immunoinformatics approaches to design multi-epitope subunit vaccines, example of malaria

10.20-10.40 Paulo Lee Ho (*Serviço de Bacteriologia, Divisão BioIndustrial, Instituto Butantan, San Paulo, Brazil*) Epitope mapping and multiepitope antigen production for antiserum production against *M. corallinus* coral snake envenomation

#### **10.40-11.00 Coffee break**

### **SESSION VI. ANIMAL MODELS IN VACCINE AND IMMUNOTHERAPY TRIALS**

11.00-11.30 **PLENARY 8.** Anne-Sophie Beignon (*IMVA UMR1184 and CEA/DRF/IBFJ/IDMIT, Fontenay-aux-Roses, France*) Systems biology and vaccine development

11.30-11.50 Pauline Maisonnasse (*IMVA UMR1184 and CEA/DRF/IBFJ/IDMIT, Fontenay-aux-Roses, France*) Ethics and public acceptance of preclinical trials

11.50-12.10 Dace Skrastina (*Latvian Biomedical Research and Study Center, and Riga Stradins University, Riga, Latvia*) Critical aspects of ethical permits for vaccine trials in rodents

#### **12.10-13.10 Lunch (Mu-Mu)**

13.10-13.30 Ekaterina Akulova (*State Research Institute of Highly Pure Biopreparations, Saint Petersburg, Russia*) Preclinical study of the anti-HIV-1 candidate therapeutic vaccine based on HIV-1 recombinant p17 protein

13.30-13.50 Maxim Abakumov (*National University of Science and Technology «MISIS»; Department of Medical Nanobiotechnology, Russian National Research Medical University; Gamaleya Research Center for Epidemiology, and Microbiology, Moscow, Russia*) Magnetic nanoparticles in cancer therapy in animal models: role of antibodies and immune system

13.50-14.10 Ilya Gordeychuk (*Chumakov Federal Scientific Center for Research and Development of Immune-and-Biological Products of Russian Academy of Sciences; Gamaleya Research Center for Epidemiology, and Microbiology, Moscow, Russia*) Marmoset model, immune characteristics

14.10-14.50 **CLOSING LECTURE** Roger Le Grand (*Centre de recherche en immunologie des infections virales et des maladies auto-immunes, Paris, France*) Animal models in vaccine and immunotherapy trials, focus on non-human primates

#### **14.50 Closing of the meeting**

**October 8, 2018**

**WORKSHOP ON VACCINE RESEARCH BY BRICS COUNTRIES (by invitation)**

**Business hotel Spektr 15.00-17.00**

Interested parties are invited to contact Maria Isaguliantis, [maria.issagouliantis@rsu.lv](mailto:maria.issagouliantis@rsu.lv)

**Introduction**

Maria Isaguliantis (*Riga Stadins University, Riga, Latvia; Chumakov Federal Scientific Center for Research and Development of Immune-and-Biological Products of Russian Academy of Sciences; Gamaleya Research Center for Epidemiology and Microbiology, Moscow, Russia*)

Short presentation of vaccine research program by BRICS countries

**Invited presentations**

- Vijay Kumar Prajapati (*Department of Biochemistry, School of Life Sciences, Central University of Rajasthan, Ajmer, Rajasthan, India*) Central University of Rajasthan, partner presentation
- Paulo Lee Ho (*Serviço de Bacteriologia, Divisão BioIndustrial, Instituto Butantan, San Paulo, Brazil*) Instituto Butantan, partner presentation
- Ed Rybicki (*Biopharming Research Unit, Molecular & Cell Biology Department, University of Cape Town, South Africa*) MCB department, University of Cape Town Partner presentation
- Shan Lu (*University of Massachusetts Medical School, USA*) Presentation of potential partners from China
- Ilya Gordeychuk (*Chumakov Federal Scientific Center for Research and Development of Immune-and-Biological Products of Russian Academy of Sciences*) Chumakov Federal Scientific Center, Moscow, partner presentation
- Andrei Kozlov (*Biomedical Center, Peter the Great St. Petersburg Polytechnic University, Saint Petersburg, St. Petersburg, Russia*) Biomedical Center, St Petersburg, partner presentation
- Yulia Savateeva (*Smorodintsev Research Institute of Influenza Ministry of Health of the Russian Federation*) Smorodintsev Research Institute of Influenza, St Petersburg, partner presentation
- Valery Ilinsky (*Genotek Ltd, Moscow, Russia*) Genotek Ltd, Moscow, partner presentation

**Invited Expert Opinion**

- Margaret Liu (*ProTherImmune, University of California, San Francisco, USA, and Karolinska Institutet, Stockholm, Sweden*)
- Joon Rhee (*Chonnam National University Medical School, and Clinical Vaccine R&D Center, Chonnam, South Korea*)

## SATELLITE SYMPOSIUM



### “HPV VACCINES AND HPV ASSOCIATED CANCER”

MOSCOW, OCTOBER 9, 2018

**Symposium venue: Mechnikov Research Institute for Vaccines & Sera, RAMS, Maliy Kazenniy pereulok, building 5a, block 3 [www.instmech.ru](http://www.instmech.ru)**

#### 10.00 Registration (free)

#### 10.30-12.30 EPIDEMIOLOGY & PATHOLOGY SESSION

10.30-11.00 Franco Buonaguro (*Institute of Cancer, Naples, Italy*) Genital and Oral HPV-related cancers: similarities and peculiarities

11.00-11.20 Maria Isaguliantis (*Riga Stadins University, Riga, Latvia; Gamaleya Research Center for Epidemiology and Microbiology*) & Maxim Vonsky (*Institute of Cytology, Russian Academy of Science, St. Petersburg, Russia*) Prevalence and distribution of high-risk human papillomavirus types in cervical squamous cell carcinoma tissues of immunocompromised patients

11.20-11.40 Andrey Runov (*Institute of Cytology, Russian Academy of Science, St. Petersburg, Russia*) Features of PD-1 and PD-L1 gene expression in squamous cell cervical carcinoma tissue in immunocompromised patients

11.40-12.00 Kirill Tsukanov (*Genotek Ltd, Moscow, Russia*) Practical applications of shotgun metagenomic sequencing for analysis of HPV species in cervical carcinoma tissues

12.00-12.20 Daria Podchufarova (*Moscow regional center for prevention and control of AIDS and infectious diseases; Gamaleya Research Center for Epidemiology, and Microbiology, Moscow, Russia*) Distribution of HPV genotypes in HIV-infected women in the Moscow region

#### 12.30-13.30 SANDWICH LUNCH & COFFEE

#### 13.30-16.00 VACCINES SESSION

13.30-14.00 Ed Rybicki (*Biopharming Research Unit, Molecular & Cell Biology Department, University of Cape Town, South Africa*) Candidate therapeutic vaccines for human papillomavirus diseases

14.00-14.30 Joon Rhee (*Chonnam National University Medical School, and Clinical Vaccine R&D Center, Chonnam, South Korea*) Flagellin is a strong vaginal adjuvant of a therapeutic vaccine for genital cancer

14.30-15.00 Paulo Lee Ho (*Serviço de Bacteriologia, Divisão BioIndustrial, Instituto Butantan, San Paulo, Brazil*) Ubiquitin fused antigens to direct epitope presentation on MHC I: HPV16 E6/E7 antigens as a model

15.00-15.30 Round table discussion

#### Closing of the symposium