

Russian British seminar
“Nanomedicine: from drug delivery to personalized medicine”
October 30th – November 3, 2017
Institute of chemical biology and fundamental medicine SB
RAS
8, Lavrentiev ave., 630090, Novosibirsk, RF
In the frame of RSF grant #14-44-00068

PROGRAM

Educational part

Conference hall ICBFM SB RAS

Nanomedicine, lectures of Prof. David B. Clarke University of Manchester, UK

30.10.2017 (Monday) 12:30 -14:30

Introduction to nanomedicines. Near patient diagnostics and imaging nanomedicine.

31.10.2017 (Tuesday) 12:30 -14:30

Nanomedicine for the route of administration (gut, skin & lung)

01.11.2017 (Wednesday) 12:30 -14:30

What makes biologics & nanomedicines successful

02.11.2017 (Thursday) 12:30 -14:30

Overcoming biological barriers & targeting organs & diseased tissue

03.11.2017 (Friday) 12:30 -14:00

Overcoming drug resistance and intracellular infections

Outlines of the lectures are on the web site of ICBFM SB RAS or can be received by request to marzen@niboch.nsc.ru .

Scientific part

Round tables

30.10.2017 (Monday) 16:00 -18:30

High-field NMR: structure elucidation and fine tuning of interacting molecules

Moderator Dr. Elena Bichenkova, University of Manchester, UK

Presenters

Ms. Linda Trivoluzzi, University of Manchester, UK

NMR derived 3D structure of oligonucleotide peptide conjugates

Dr. M.Kuprushkin, Institute of Chemical Biology and Fundamental Medicine SB RAS, Russia

2D and 3D NMR in the analysis of the structure of complex molecules

Dr. D. Stetsenko, Institute of Chemical Biology and Fundamental Medicine SB RAS, Russia

Novel oligonucleotide analogues: mechanism of interaction with targeting RNAs

31.10.2017 (Tuesday) 16:00 -18:30

Molecular modelling in rational design of bulge-forming oligonucleotide conjugates

Moderator Prof. M. Zenkova, Institute of Chemical Biology and Fundamental Medicine SB RAS, RF

Presenters

Dr. E. Bichenkova University of Manchester, UK

Design of bulge-forming oligonucleotide conjugates

Dr. A. Lomzov, Institute of Chemical Biology and Fundamental Medicine SB RAS, RF

Computer simulation of the bulge forming conjugates complexes with RNA: Part 1.

Dr. K. Burusko, University of Manchester, UK

Computer simulation of the bulge forming conjugates complexes with RNA: Part 2.

Mr Y. Starocelets, Institute of Chemical Biology and Fundamental Medicine SB RAS, RF

Cleavage efficacy and sequence-specificity of bulge-forming oligonucleotide-peptide conjugates targeted to synthetic tRNA-like substrates

Dr. R. Bryce Manchester University, UK (via Skype)

Computer-aided molecular design

01.11.2017 (Wednesday) 16:00 -18:30

Drug delivery: how route of administration affects bioavailability and PK of therapeutic nucleic acids

Moderator Prof. D. Clarke, University of Manchester, UK

Presenters

Dr. O. Markov, Institute of Chemical Biology and Fundamental Medicine SB RAS, RF

Multicomponent mannose-containing liposomes efficiently deliver tumor-derived RNA in murine immature dendritic cells and provide productive anti-tumour response in murine melanoma model

Dr. E. Chernolovskaya, Institute of Chemical Biology and Fundamental Medicine SB RAS, RF

Cholesterol-containing nuclease-resistant siRNA accumulates in tumors in a carrier-free mode and silences MDR1 gene

Dr. T. Kabilova, Institute of Chemical Biology and Fundamental Medicine SB RAS, RF

Effect of composition consisting of short double-stranded immunostimulatory RNA and liposomal composition delivery vector 2X3-DOPE in murine melanoma model

Prof. M. Zenkova, Institute of Chemical Biology and Fundamental Medicine SB RAS, RF

Targeted delivery of nucleic acids into xenograft tumours mediated by novel folate-equipped liposomes

02.11.2017 (Thursday) 16:00 -18:30

Past, nowadays and future of antisense technologies.

Moderator Dr. E. Chernolovskaya, Institute of Chemical Biology and Fundamental Medicine SB RAS, Russia

Presenters

Dr. O. Patutina, Institute of Chemical Biology and Fundamental Medicine SB RAS, RF

miRNAs as a novel targets for antisense oligonucleotide to combat cancer.

Prof. K. Demonakos, University of Manchester, UK

AntiMirs in clinical trials

Dr. A. Sen'kova, Institute of Chemical Biology and Fundamental Medicine SB RAS, RF

Inflammation and neurodegenerative diseases

Dr. N. Mironova, Institute of Chemical Biology and Fundamental Medicine SB RAS, RF

Disturbance of miRNA balance at neurodegenerative diseases

Prof. M. Kristc – Demonakos (via Skype), Salford University, UK

Selective modulator of glucocorticosteroid receptors in ALL and CLL cure.

Prof. V. Vlassov

Closing remarks