



PROGRAM

4th All-Russian School of Young Scientists on Boron Neutron Capture Therapy

July 11-12, 2022

Academpark, 11 Nikolaev str.
Novosibirsk, Russia



Russian
Science
Foundation



N*Novosibirsk
State
University
*THE REAL SCIENCE

July 11

- 10:00 Registration (main entrance to BINP, 11 Lavrentiev ave., Novosibirsk)
- 10:00 Tour on BNCT facility in Budker Institute of Nuclear Physics
- 13:00 Coffee break (Academpark, 11 Nikolaev str., Novosibirsk)
- 13:50 School opening
- 13:55 Greetings: Director of the BINP Academician **Pavel Logatchov**
Rector of NSU Academician **Mikhail Fedoruk**
- 14:00 Lecture # 1. Prof. **Yuan-Hao Liu** (Neuboron Medical Group, Nanjing, P.R. China)
"How to bring BNCT into a hospital"
- 14:30 Lecture # 2. Prof. **Valerii Ivanov** (Blokhin Russian Cancer Research Centre, Moscow, Russia)
"Basic principles of radiation oncology or What is radiation oncology"
- 15:00 Lecture # 3. Prof. **Alexey Lipengolts** (Blokhin Russian Cancer Research Centre, Moscow, Russia) "Specificity of BNCT as a cancer treatment radiotherapy modality"
- 15:30 Lecture # 4. Prof. **Irina Zavestovskaya** (Lebedev Physical Institute, Moscow, Russia)
"Radiology Binary Technologies"
- 16:00 Lecture # 5. Prof. **Ekaterina Barmina** (Prokhorov General Physics Institute, Moscow, Russia)
"Laser-synthesized nanoparticles as a base for BNCT drugs"
- 16:30 Coffee break
- 17:00 Oral session
- # 1 **Marina Sarycheva** (Chelyabinsk, Russia) "The neutron radiation therapy in treatment of patients with progression of primary high-grade brain glioma"
- # 2 **Anna Kuznetsova** (Chelyabinsk, Russia) "The results of the work of the Ural Center for Neutron Therapy 1999-2018"

- # 3 **Takuya Fujimoto** (Osaka, Japan) “Novel Glucose-BSH BNCT Targeting high CA19-9 Pancreatic Cancer”
- # 4 **T. Popova** (Novosibirsk, Russia) “Human serum albumin as a universal platform for constructing theranostics in the framework of boron neutron capture therapy”
- # 5 **A. Ovsenev** (Tomsk, Russia) “Investigation of the possibility of using the R7-M accelerator for the purposes of BNCT”

19:00 Welcome party (Greenhouse, banquet hall, 12/2 Nikolaev str., Novosibirsk)

July 12

11:00 Poster session (Academpark, 11 Nikolaev str., Novosibirsk)

- # 1 **Tatiana Konkova** (Novosibirsk, Russia) “Multielemental (B, Gd) NanoBioComposites For Multi-Channel Theranostics”
- # 2 **Ilya Korolkov** (Almaty, Kazakhstan) “Synthesis and investigation of carborane containing hydrindons as potential agents for BNCT”
- # 3 **Tatiana Sycheva** (Novosibirsk, Russia) “New concept of a neutron beam shaping assembly for boron neutron capture therapy”
- # 4 **Ibrahim Ibrahim** (Tartous, Syrian Arab Republic) “Characterization of the neutron flux for boron neutron capture therapy”
- # 5 **Dmitry Surodin** (Novosibirsk, Russia) “Lithium as a promising therapeutic agent for Neutron Capture Therapy”
- # 6 **Iaroslav Kolesnikov** (Novosibirsk, Russia) “Instrumentation for the generation of neutrons for the diagnostics of advanced materials”
- # 7 **Evgeniia Sokolova** (Novosibirsk, Russia) “Fast neutron beam for radiation testing of advanced materials”
- # 8 **Timofey Bykov** (Novosibirsk, Russia) “Software control for the water phantom in the neutron flux measurements experiment for BNCT”
- # 9 **Viktoriia Konovalova** (Novosibirsk, Russia) “Cold neutron producing in the accelerator-based neutron source VITA”
- # 10 **Enkhtsetseg Byambatseren** (Mongolia) “The new design and validation of an epithermal neutron flux detector using $^{71}\text{Ga}(n,\gamma)^{72}\text{Ga}$ reaction for BNCT”
- # 11 **Marina Bikchurina** (Novosibirsk, Russia) “Investigation of promising materials by activation analysis”
- # 12 **Aleksey Koshkarev** (Novosibirsk, Russia) “Implementation of automation system and visualization of experimental data in real time at the BNCT facility BINP”
- # 13 **Alisa Tatarinova** (Dubna, Russia) “New features of the Rutherford Backscattering Spectroscopy Method in nanotechnologies with the use of powders”
- # 14 **Anna Zakharova** (Dubna, Russia) “Investigation of bulk porous structures by Rutherford backscattering (RBS)”
- # 15 **Ilya Chepurchenko** (Dubna, Russia) “Device for determining the elemental composition by means of inelastic scattering of fast neutrons by matter at the EG-5 accelerator (Dubna)”

- 13:00 Coffee break
- 14:00 Lecture # 6. Prof. **Sergey Uspinskii** (Institute of Synthetic Polymeric Materials, Moscow, Russia) "Biomedical application of nanostructures of boron: elemental boron, boron carbide and boron nitride"
- 14:30 Lecture # 7. Prof. **Boris Sukhov** (Institute of Chemical Kinetics and Combustion, Novosibirsk, Russia) "Multielemental Nano-Bio-Composites With Neutron Capture, Magnetic, Photoactive and Biotarget Properties for Multi-Channel Theranostics"
- 15:00 Lecture # 8. Prof. **Yinghuai Zhu** (Sunshine Lake Pharma, Dongguan, China) "Boron Analogues of α -Amino Acid-based Anti-tumor and Anti-rheumatoid Arthritis Agents for Boron Neutron Capture Therapy"
- 15:30 Lecture # 9. Prof. **Alexandr Doroshkevich** (Joint Institute for Nuclear Research, Dubna, Russia) "Condensed matter research at the EG-5 accelerator"
- 16:00 Lecture # 10. **Alina Garina** (Petersburg Nuclear Physics Institute, Gatchina, Russia) "Proton boron capture therapy as possible method for brain tumors treatment"
- 16:30 Coffee break
- 17:00 Lecture # 11. Prof. **Sergey Taskaev** (BINP, Novosibirsk, Russia) "Overview of Accelerator-based Neutron Sources"
- 17:30 Oral session
- # 6 **Valeria Raskolupova** (Novosibirsk, Russia) "A new multimodal construct for BNCT"
 - # 7 **Vladislav Potselev** (Moscow, Russia) "Synthesis of complex compounds of gold for cancer diagnosis"
 - # 8 **Polina Khaptakhanova** (Moscow, Russia) "Boron nanostructures in boron neutron capture therapy: synthesis, properties"
- 19:00 Get Together (Greenhouse, banquet hall, Nikolaeva, 12/2, Novosibirsk)
- 21:00 School closing