

Drug Discovery in CIS – ISTC Landscape



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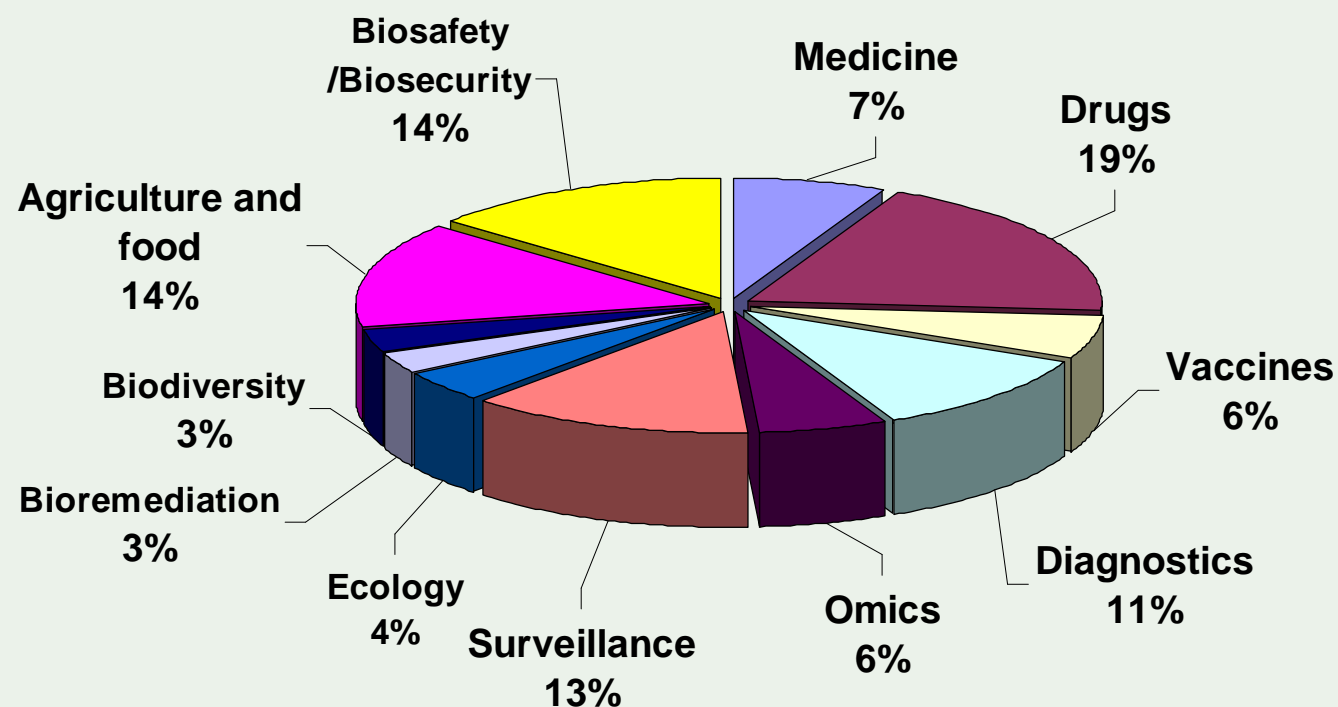
International Science & Technology Centre



Moscow

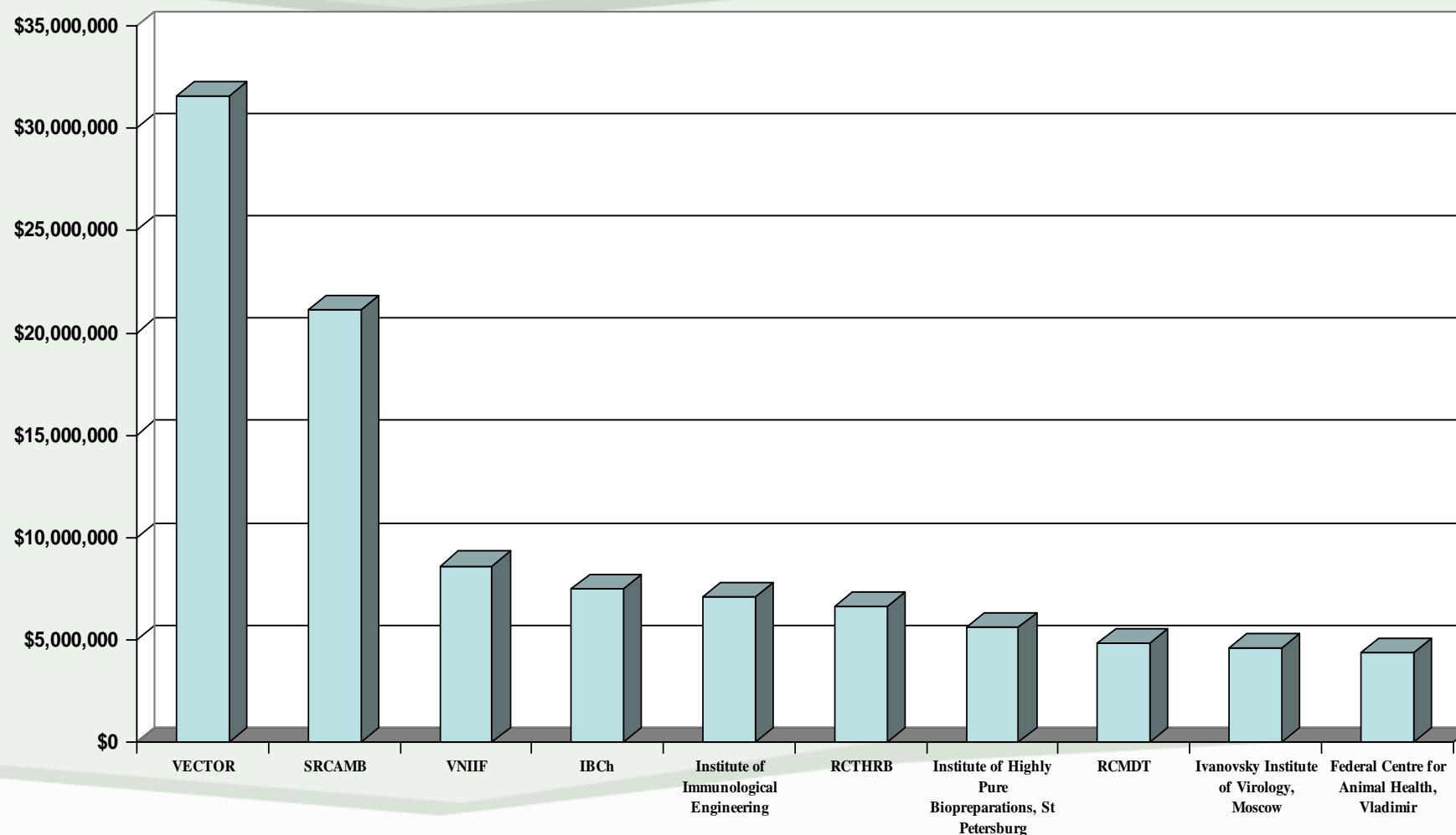
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Technical directions of the Biomedical ISTC projects



1994-2009
720
projects,
\$210 mln

Main ISTC beneficiaries in BIO



Sustainable future of ISTC recipients – HOW?



- **Innovation projects**
- Infrastructure projects (safety, quality, communications)
- **Commercialization of project results**
- International quality (GLP, GMP, GCP), ethical and safety standards
- **IPR protections**
- Presentation of the institutes at the international business forums (Bio-USA, Bio-Europe, Bio-Asia, Bio-Japan, Bio-Canada) – booths, presentations, informational materials, business match-making,
- **Training (business, quality, biosafety/biosecurity, ethics/bioethics, humane animal care and use)**

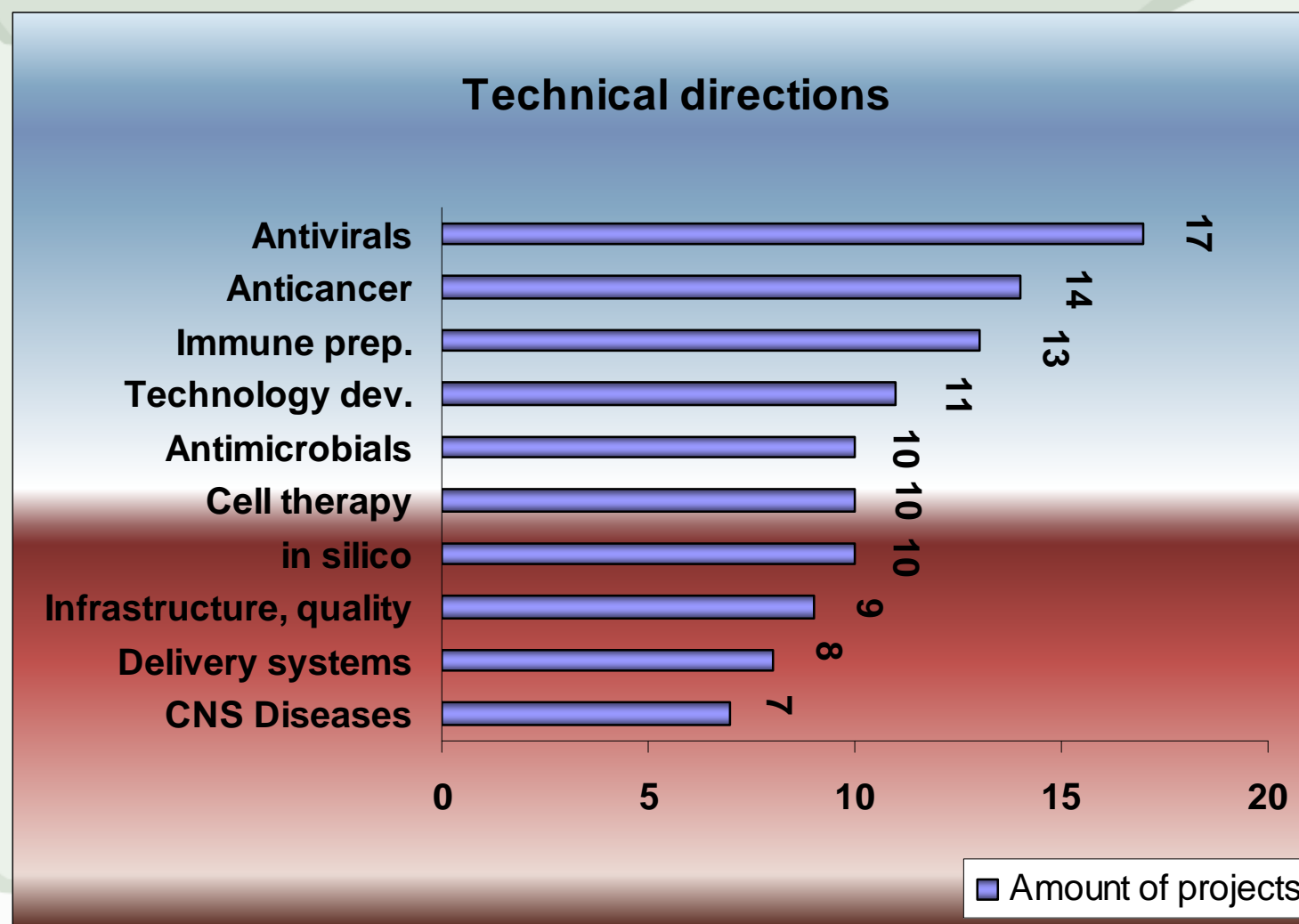


Combating global diseases- ISTC priority



- Disease surveillance
- Detection and Diagnostics
- Drugs and Vaccine Discovery

Drug Discovery - statistics



Drug Discovery - Infrastructure



- *Inst of Bioorganic Chemistry, Puschino (DOS) –SPF rodents Breeding Facility*
 - *Laboratory of Biological Trials*
1. **State Research Center for Applied Microbiology, Obolensk (DTRA)**
 2. **State Research Center for Virology and Biotechnology VECTOR, Koltsovo (DARPA) State Research Center for Molecular Diagnostics and Therapy, Moscow (DTRA)**
 3. **State Research Institute of Highly Pure Biopreparations, St. Petersburg (DARPA)**
 4. **State Research Institute of Immunological Engineering, Lyubuchany (DARPA)**
 5. **Research Center of Toxicology and Hygienic Regulation of Biopreparations, Serpukhov (DTRA, BII)**
Harmonization of the Conditions to Perform Pre-Clinical Trials According to the Russian and US Standards
 6. **Research Institute of Microbiology and Virology, Almaty**
 7. **Central Tuberculosis Research Institute, Moscow (DHHS)**
 8. **All-Russia Scientific Veterinarian Institute, Kazan (NTI)**
 9. **Institute of Physiologically Active Substances, Chernogolovka - (BII)** Identification, Addition and Realization of the Nascent Value of Novel Compounds as Drug Candidates Through Preclinical Safety and Efficacy Testing and technology Transfer
 10. **Federal Centre for Animal Health, Vladimir (Bayer)**



14.07.2009



Drug Discovery - Infrastructure Centre for TB Clinical Trials

Project # 2879

Development of a Research
Center for Tuberculosis
Clinical Trials Through the
Conduct of a Study of a
Modified Treatment Regimen
for WHO Category 1 Patients

Moscow Medical Academy+
Obolensk

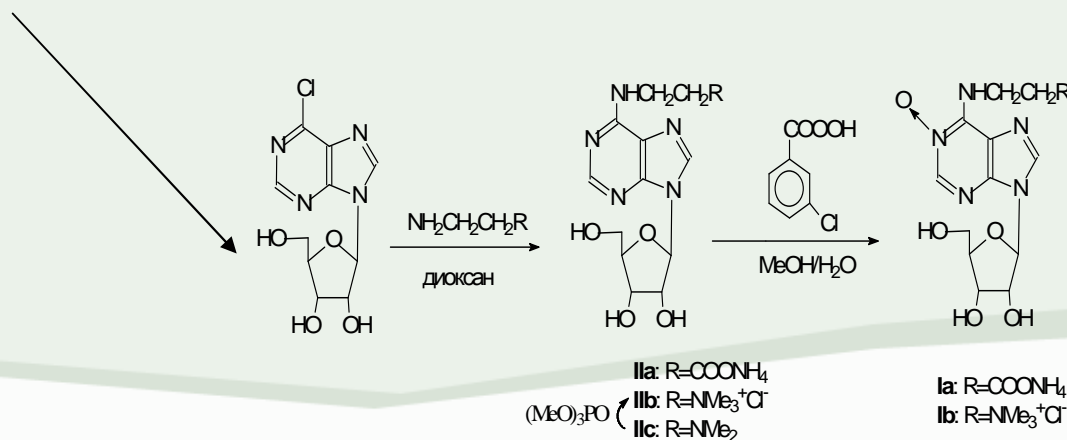
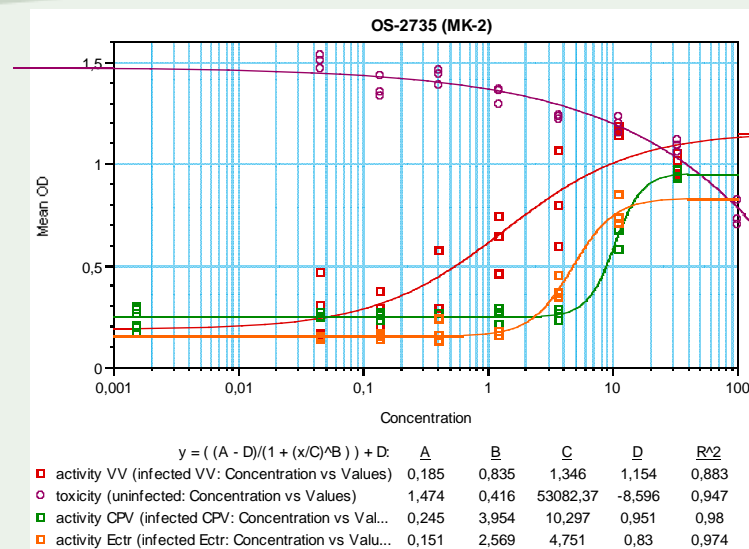
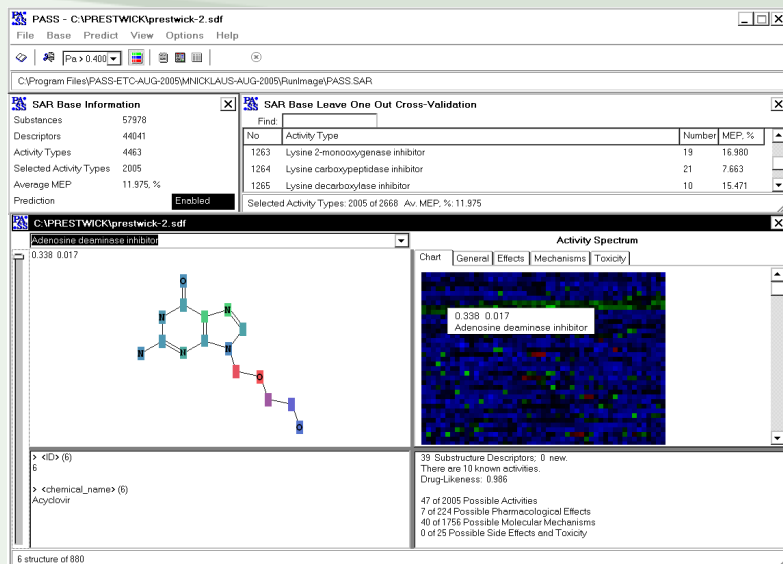


Training of the
personal in GCP,
Access



#2174 Synthesis,
characterization of
targeted delivery to
macrophage receptors
and evaluation of **anti-
tubercular activity of
the conjugates of anti-
tubercular antibiotics
with ligands to
macrophage**

Drug Discovery - research: New antiviral preparations – Russia- Smallpox



IPR

14.07.2009

Drug Discovery - research: Russia – anticancer preparations

- **# 3548**

Novel Antitumor Heterocyclic Agents, Including Fluorine-Containing Compounds, Acting Via Inhibition of Protein Kinases

Khimrar, Moscow reg.

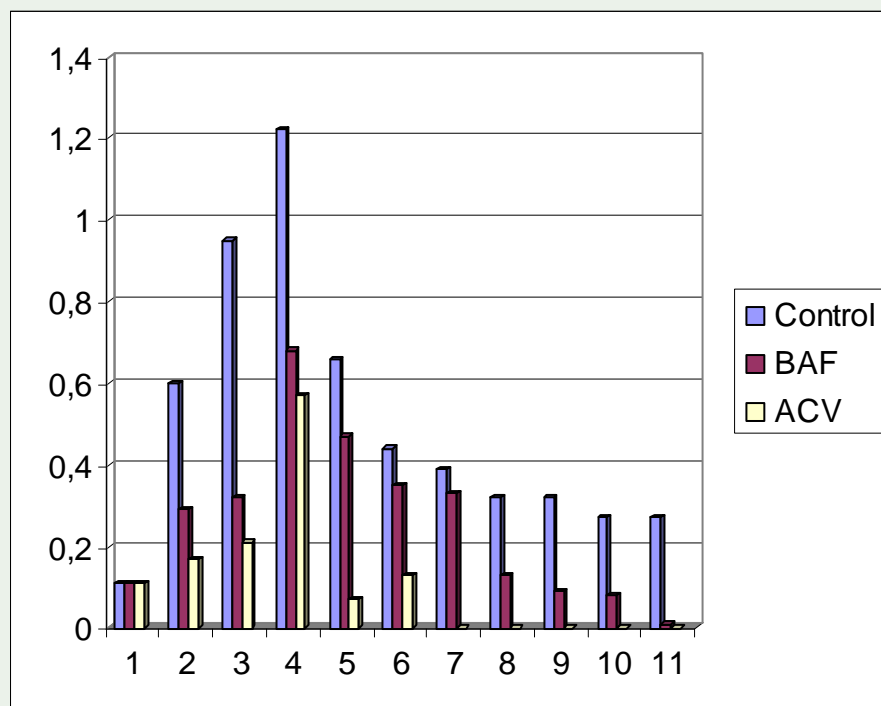
#3104 Production of Recombinant Mullerian Inhibiting Substance (MIS) for the Treatment of Human Cancers

Institute of Highly Pure Biopreparations, St Petersburg

#3777 Development and Application of QSAR Rodent Toxicity Models for Chemical Compounds

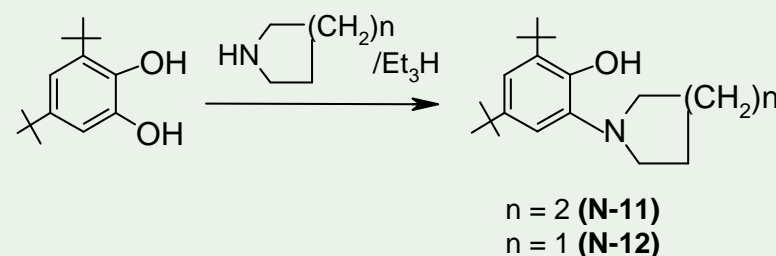
Institute of physiologically active substances, Chernogolovka, Moscow region

Drug Discovery - research: New antiviral preparations – Armenia and Byelorussia



#B-1206 Development of effective
antiviral agents of a new type,

Byelorussian State University, BRIEM



A-1677 The Synthesis of Potential Biologically Active Heterocycle
Substituted α -Amino Acids and Peptides. Investigation of their Antibacterial,
Antiviral and Antitumor Properties (Funded December, 2008)

Drug Discovery Research – Central Asia

- Unique natural sources of biologically active herbs
- Collaboration with private and governmental bodies in US and EU

New antibiotics, antidiabetics, anticancer, cardio preparations

Kr-1684 Cell Biotechnology of Plant-Based Medicines: Elite Lines of Germplasm and Hairy Root Cultures of Endemic and Rare Plant Species of Kyrgyzstan of the Genus of Scutellaria

Drug Discovery - new Drug Design and Development Targeted Initiative

Call for proposals – main technical topics:

- ***Innovative projects*** - considering previous results and global importance including *in silico* design, toxicity forecasting; screening of collections for natural products, optimizing of compounds collection, identification effective chemical compounds and their chemical tuning to improve *in vitro* efficacy, to identify new prokaryotic targets and metabolic pathways, defining resistance breaking drug properties, developing of new *in vitro* screening activities, efficacy and safety tests, etc.
- ***International quality standards*** - infrastructure upgrades, quality improvements and business development.
- ***Commercialization, technology transfer***, consulting, business promotion.

ISTC Workshop program - 2009 (www.istc.ru)



- **Combating Global infections, September 21-24, 2009, Irkutsk**
- **Global Disease Surveillance, reporting, forecasting, local and international networking**
 - Zoonoses (Lessons learnt – SARS +Avian flu + influenza)
 - Food-borne diseases
 - Reference collections of microorganisms
- **Detection and diagnostics, centers of excellence, national reference labs for diagnostics of socially important human diseases, zoonotic live-stock diseases**
- **New drugs and vaccines**
- **Infrastructure**
- **Certification and accreditation**
- **Business, quality and biosafety trainings**



Open for cooperation

<http://www.istc.ru>

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