Research Opportunities in TB Drug Discovery and Diagnostics
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NIAID/ISTC Workshop on Research Opportunities in TB Drug Discovery and Diagnostics

• Approximately 83 scientists engaged in tuberculosis research attended the two-day workshop (45 from the RF, 8 from CIS, 10 from the U.S. and Europe.

• Forty speakers and 25 poster presenters discussed the latest advances in TB epidemiology, diagnostics, drug discovery, and clinical drug development.

• Russian Federation scientists are active in important tuberculosis research.

• Multiple institutes are engaged in drug discovery, diagnostics development, immunological and pathological studies on tuberculosis.
Sophisticated molecular diagnostics for MDR TB have been developed but affordability and accessibility at clinical points of care are not clear.

MDR and XDR strains are highly prevalent but DST for second line drugs remains to be standardized.

Improved sensitivity of TB detection in HIV+ persons is needed.

There exists difficulty in differentiating between NTM and Mtb at points of care prior to treatment.

Diagnostics and treatment regimens formulated specifically for pediatric tuberculosis are generally not available.
Russia has outstanding synthetic chemists, but support is lacking for basic science in general. Connections between medicinal chemists, microbiological laboratories, and clinical investigators are not very well established.

There are limited facilities for biomedical research under BSL-3 conditions.

Differences in strains of Mtb used as standards in the west and in Russia may need to be examined for continuity of results. At least three Beijing family strains appear to be increasing.

Diagnostic and drug susceptibility testing should be harmonized across Russia and with new drug developers.
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- Increased communication and collaboration with investigators outside of Russia could be very beneficial to the field.

- Importation of reagents, equipment, and microbes remains a huge barrier. There continue to be barriers in shipping costs and customs clearance procedures.

- NIH representatives discussed opportunities for research support in international programs, research project grants, genomics and proteomics studies, and preclinical services for drug and diagnostic product development.
• Clinical trial infrastructure must be strengthened for registration-type studies.

• At least 6 new chemical entities are in Phase I and II clinical trials and progressing in the global pipeline.

• Regulatory and bureaucratic bottlenecks have been encountered in recent studies of fluoroquinolones.

• Cooperation between institutes on standards of care and approaches to TB treatment will need to be harmonized for multicenter studies.

• Concerns regarding future sustainability of clinical sites presently equipped and engaged should be addressed for the coming global Phase III trials.