



A Dutch partnership for global TB laboratory network strengthening

What is DTLab?

DTLab is a partnership among three renowned Dutch institutes, KNCV Tuberculosis Foundation, The Royal Tropical Institute (KIT) and the National Institute for Public Health and the Environment (RIVM). DTLab aims to strengthen individual TB laboratories as well as TB laboratory networks, particularly in low-and middle-income countries (LMICs). Our ultimate goal is to contribute to, with Stop TB partners, the global elimination of TB.

What is needed?

Globally, a massive scale-up of laboratory services is needed in order to attain universal quality TB diagnosis by 2015, in line with the Global Plan to STOP TB (2011-15). While smear-microscopy is still considered an important existing diagnostic tool for TB, other technologies are necessary to diagnose smear-negative, extra-pulmonary and drug-resistant tuberculosis. Many countries have traditionally focused on an earlier World Health Organization (WHO) recommended strategy of prioritizing case-detection of smear-positive cases. Thus, most country laboratory networks are not currently designed to detect all forms of TB. The present strategy to identify all forms of TB requires not only expanding but also upgrading TB laboratory networks in many countries.

A revised global strategy

A revised global strategy requires the expansion TB diagnostic capacity in most LMICs. New tools recently endorsed by the WHO, such as LED fluorescence microscopy and molecular technologies (i.e. the Xpert MTB/RIF test and line probe assays), also need to be strategically considered for their inclusion in TB laboratory networks.

Implementing TB-specific strategies to strengthen TB laboratory networks should be considered within broader strategic laboratory strengthening initiatives. A process of integrated systems, however, needs careful consideration to ensure that it strengthens rather than weakens TB laboratory systems, and increases efficiency. Quality management of TB and general laboratory networks, including external quality assurance (EQA) and accreditation schemes, will safeguard the capacity of TB laboratory systems.

What can DTLab offer?

Collectively, DTLab has a well-established track record in TB laboratory strengthening tools development, in-country TB laboratory strengthening technical assistance and the management of country-level demonstration projects. Specifically, DTLab has:

- A team of specialists working on TB laboratory strengthening in Africa, Asia and Europe;
- Extensive experience in TB laboratory policy development, strategic planning, technical and managerial training, quality management system implementation and operational research;
- Highly qualified consultants with solid knowledge and experience of laboratory strengthening including holistic programmatic and specialized technical TB-laboratory expertise. DTLab has proven capacities to link the multiple players in the dynamic TB diagnostic process e.g., linking patient education and communication, policy, clinical algorithms and strategic planning with laboratory quality management, laboratory mapping with Geographic Information Systems (GIS), operational research, expansion and upgrading;
- Representation in the Global Laboratory Initiative (GLI).

Before DTLab support



After DTLab support

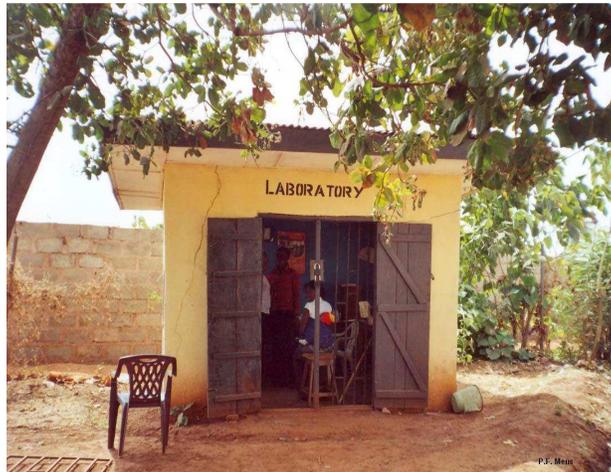


DTLab's role in strengthening laboratories

Collectively, DTLab has provided technical assistance for TB-specific laboratory strengthening in Africa (Benin, Botswana, Ethiopia, Kenya, Nigeria, Rwanda, Tanzania, Uganda, Zambia, and Zimbabwe), Asia (Cambodia, China, India, Indonesia, Pakistan, and Vietnam), Central Asia (Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan) and Europe (Russian Federation, The Netherlands, Ukraine). Below are some concrete examples of what DTLab consultants have been doing:

- Enabled the National TB Reference Laboratory (NTRL) in Botswana to successfully achieve the first ISO 15189 accreditation of an NTRL in sub-Saharan Africa;
- Led the development of a GLI Stepwise Process towards TB Laboratory Accreditation (ISO 15189) tool with partners (www.GLIquality.org);
- First to develop the LED fluorescence microscopy technique for TB. DTLab is currently facilitating the upgrading of Botswana's laboratory network to replace light microscopy with LED fluorescence microscopy;
- Guide the process of developing and implementing national TB laboratory policies, strategic plans and implementation plans; lead the development of a TB CARE I handbook on TB-specific national laboratory strategic plans including providing in-country technical assistance to develop such plans in Botswana and Nigeria;

- Organize regional and international training for consultants and laboratory staff to utilize TBCAP and TB CARE I laboratory tools as well as to integrate Xpert MTB/RIF testing into TB laboratory strategic plans;
- Provide technical assistance and training to the NTRLs of Benin and Uganda to achieve ISO 15189 accreditation and become full members of the SRL network;
- Support the development of standard operating procedures (SOPs), registers, practical guidelines, and other tools for the quality-assured implementation of Xpert MTB/RIF testing in Cambodia, Indonesia, Kenya, Nigeria, Vietnam and Zimbabwe;
- Develop operational research projects in multiple countries, drug resistance surveys in Botswana, Tanzania and Zimbabwe as well as national TB prevalence surveys in Pakistan and Rwanda;
- Provide training in management and leadership as well as various aspects of quality management for laboratory managers, quality officers and technical staff in the Netherlands and abroad;
- Perform individual laboratory and laboratory network assessments and develop improvement plans together with the client;
- Assist TB control programmes and TB laboratory networks to utilize GIS to optimize their services by mapping TB cases, laboratories and epidemiologic factors dependent on country requests;
- Facilitate supra-national reference laboratory services for Ethiopia and Turkmenistan. DTLab has the capacity to provide TB laboratory bench training in The Netherlands and abroad in culture, DST and molecular techniques.



Picture: Petra Mens, KIT

DTLab services

Collectively, DTLab has been contracted for its services by various government and non-government entities e.g., United States of America Agency for International Development (USAID), The World Bank, The Dutch Government, The Canadian Government, The World Health Organization, The Global Fund and the International Union Against TB and Lung Disease. DTLa+b is available to be contracted for a wide-range of tailor-made, state-of-the-art TB laboratory strengthening services. Please contact us with your queries for technical assistance:

DTLab Secretariat (Dr. Linda Oskam): loskam@kit.nl

www.kit.nl



Royal Tropical Institute

www.tuberculose.rivm.nl



National Institute for Public Health
and the Environment
Ministry of Health, Welfare and Sport

www.kncvtbc.org



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To eliminate TB