

First TB Research Funders' Forum

April 7, 2016, Washington DC

Meeting Report

Introduction

Although there are a number of challenges to establishing a successful research programs in low/middle income countries, three universal concerns include developing support for training in science and biomedical research, producing competitive grant applications, and in acquiring skills in financial management of research grants and contracts. Knowledge of various funders' research and training support mechanisms would be of high value to the global TB research community and helps funders refer applicants to the most appropriate funding bodies.

The goals of this First TB Funders Forum were:

- *To create a platform for funders to exchange information about their various processes, strategies and methods of supporting research capacity building (CB) in low- and middle- income countries; and,*
- *To generate support for the concept of a funder information network and to ensure that the interactions of the group will have value for both the funders and the community at large through an improved understanding of the mission, strategy and mechanisms (schemes) of each funder.*

Participants

WHO (Christian Lienhardt - Chair, Nebiat Gebreselassie-Remote, Priya Shete-Remote)

Funders	Observers
BMGF (Jan Gheuens)	Aeras (Dara Erck, Samina Piracha)
CDC (Eric Pevzner)	MSF-Access (Grania Brigden)
EDCTP (Monique Surette)	TAG (Erica Lessem, Mike Frick, Suraj Madoor)
European Commission (Hannu Laang) – Remote	TB Alliance (Melvin Spigelman)
NIH/Fogarty International Center (Jeanne McDermott)	
NIH/NIAID (Alison Kraigsley, Christine Sizemore (DMID), Sara Read (DAIDS),)	
USAID (YaDiul Mukadi)	

Christian Lienhardt (WHO) presented the background, objectives and targets of the End TB Strategy and its components. On this basis, he presented the details of the Global Action Framework for TB Research (GAF). He highlighted on the need for funding to address the gaps in research, both from TB-endemic and non-TB endemic countries. He also emphasized the need for international collaboration in realizing the End TB strategy. Key elements of the presentation included:

- Presentation of the elements of the GAF, outlining the various activities to be conducted at global and country level;
- Presentation of the concept of a *TB research funders' forum* designed to create a network of funders that share information and develop mutual understanding on the various strategies on TB research;
- Discussion of expected outputs from the first forum, such as information sharing on key strategies and innovative methods for supporting research capacity building; and,
- Presentation of outcomes of the TB research CB survey, highlighting the existing complementarity in research discipline coverage and diversity in CB activities by the different funders.

Presentations by funders: Six funders presented their CB activities in TB research, in the context of low and middle income countries with high TB incidence (BMGF, CDC, EC, EDCTP, NIH/Fogarty, NIH/NIAID, and USAID).

Note: This is not a detailed summary of the presentations but a highlight of the CB initiatives and outcomes of the discussions.

1. **NIH/NIAID (Christine Sizemore):** CS discussed NIAID's different extramural divisions that manage and fund research on more than 300 pathogens. There is intramural funding for projects taking place within NIAID's campus. However, all extramural grants are on an application basis, which are peer-reviewed and scored by merit. Foreign institutions can apply for most of these extramural grants: directly, in collaboration with US institutions, or through channels of bilateral and multilateral agreements. There are also examples of established bilateral agreements between the US and a foreign country under which collaborative funding projects were established.
2. **European Commission -EC (Hannu Laang):** HL pointed out that EC does not have a separate capacity building scheme for TB research. Within the context of Horizon 2020, TB research can fairly compete with other health fields for funding and CB initiatives can be embedded in these applications. EC contributes to CB directly or through partners.
 - i. Directly, through collaborative research EC implements on its own. There is a capacity building effort targeting low-income

countries for instance through EDCTP that is funding capacity building in sub-Saharan countries.

ii. In partnership with implementing partners: the following examples were given:

1. TBVAC2020 is a Horizon 2020 collaboration project with 40 partners, including South Africa, with CB built in;
 2. Eliciting mucosal immunity in tuberculosis (EMI-TB) is another Horizon 2020 consortium with one Africa partner (Mozambique) out of 14 partners in eight countries. This consortium is one way of North-South collaboration, and path to create stronger CB initiatives;
 3. In FP7 cooperation health several projects have PhD exchange programs for knowledge transfer between Europe, *and* Asia , as well as Africa and South-America;
 4. In addition, other FP7 programmes contribute to capacity building
 - a. infrastructures (1.4 million Euro),
 - b. FP7 people: For training young researchers in Europe (9 million Euro).
3. **NIH/Fogarty (Jeanne McDermott):** JM highlighted that Fogarty does not have dedicated TB research CB programs, but it does have general programs that incorporate TB research CB. Fogarty supports US and low- and middle-income country scientists and institutions in CB (in research themes focused on low and middle income countries). Three paths for support of CB activities exist: institutional training grants/programs, individual career development grants, and research-focused grants, which include some element of CB. Fogarty also has a *planning grant*, which is a grant scheme for low-income institutions to collect preliminary data and conduct preparatory meetings, the products of which then form the basis for larger grant applications.
4. **CDC (Eric Pevzner):** EP is from the Global TB Branch, a new branch established within the newly formed Division of Global HIV and TB in July of 2015. The activities of the Branch include a focus on international TB research. EP pointed out that CDC does not fund CB directly, but does so indirectly through activities intended to strengthen TB programs. CDC builds research CB by implementing or supporting fellowships and training programs, placing TB advisors, offering operational research (OR) training courses, and establishing laboratory system strengthening programs. CDC also works to build research CB in partnership with other funding agencies such as NIH and USAID. EP gave example of OR training in India, which has clear impact on national policies on TB/diabetes screening, as well as on TB care practice (e.g. web based drug-resistance surveillance) and CDC's significant investment in laboratory strengthening through supporting CB activities such as SLMTA and SLIPTA.

5. **EDCTP (Monique Surette):** MS introduced EDCTP as a public-public partnership between Europe and sub-Saharan Africa that supports clinical trial and capacity building, with strong focus on collaboration projects involving at least 3 countries. EDCTP is funded by EC and contributions of individual member countries. The main focus areas have been malaria, HIV, and TB, and, since 2014, Neglected Infectious Diseases (NIDs). Overall budget is 683 million Euro for 10 years (since 2014). Senior investigator fellowships, preparatory fellowships after PhD, and Pharma placements are some of the ways EDCTP engages in CB at the individual level. The program promotes sustainability by creating regional networks of excellence that facilitate South-South collaboration and training.
6. **USAID (YaDiul Mukadi):** YM described USAID's direct 20 million USD total budget for research, 25% of which is for CB (for 2015 fiscal year). However, most of the TB research CB occurs indirectly through projects such as Challenge TB, and other bilateral programs such as HEAL TB – Ethiopia, Track-TB in Uganda, etc. Commitment for CB in operational research was iterated as one of USAID's interest areas. YM also briefly presented the USG's National Action Plan on MDR TB: Objective 3 of this action plan is on the need for research, with a sub-objective iterating the need for research CB in endemic countries.
7. **BMGF (Jan Gheuens):** JG stated that BMGF's total budget for TB is 130 million USD, excluding contribution to Global Fund. BMGF does not sponsor direct CB activities, but CB is supported indirectly through its implementing partners. For example, while there is no BMGF infrastructure grant for research, as part of a larger project, a BSL3 laboratory is being built in South Africa. JG also shared other mechanisms to support TB research including: (i) grants (large portfolio grants like CPTR), (ii) contracts (through Product Development Partnership (PDPs) like Aeras, TB Alliance, FIND and others), and (iii) program related investments (PRIs) (loans that can be forgiven for e.g. funding a company's second manufacturing line).

After the presentations, there was a brief open discussion. The highlights of these discussion points are summarized below.

Discussion

The value of this forum in sharing strategies leveraged by various funders for CB in TB research to assist the TB scientific community in identifying the most relevant funders/funding opportunities was fully supported by participant funders. The need to connect small, medium and large funders to close gaps in CB efforts was also shared. Moreover, the need for CB building to better equip countries to respond to epidemics and pandemics was highlighted (using the Ebola countries as examples). Other outcomes are discussed below:

- *Demand driven approach.* The need of a bottom-up approach to understand CB needs is optimal. WHO gave an example of Brazil's TB research-network. The network's engagement in driving CB for TB from a country perspective was underscored;
- *Improving sustainability of capacity building.* CDC suggested that programs with multi-year funding (10-15 years) deliver the best results. In the topic of sustainability, the challenge of identifying how to support trained and skilled individuals if and when there is no salary to support them nationally was discussed;
- *Linking.* Individual based CB initiatives are best when linked-with MoH and national TB programmes (NTPs) so they can solve problems relevant to programmes;
- *Monitoring.* New monitoring and evaluation tools are needed to assess the utility and impact of CB initiatives.

Suggestions made by the participants

	Suggestions	Rationale
1	Participation of the Global Fund (GF) would be highly suitable	Because of GF's focus on programmatic aspects of TB control, it may (ideally) fund operational/implementation research
2	For the next meeting, invite representatives from countries like South Africa, Brazil, China and India to share experiences	These countries are domestic funders of TB research
3	Invite representatives from high TB burden countries (MoH, research networks or other stakeholders)	To get country perspective on how to best link CB initiatives to programme needs.
4	Community engagement should be supported in the context of capacity building for TB	To create a TB literate community (it is a sustainable and cost-effective mechanism)

Following this, Alison Kraigsley (NIAID) presented the **TB Research Funders' Compendium**, to summarize missions and approaches by the top 10 TB R&D funders. The Forum participants supported the need for developing a funder database for applicants. Funders also discussed the challenge they encounter when applicants without proper qualifications or qualified applicants with the wrong perception about what is being funded approach them. There was consensus that such a living document would help to resolve common confusion and difficulties in the application process for both researchers and funders.

Action points:

- To change the title of the compendium to "Compendium for R&D Funders that support TB"
- FIC and NIAID to field test the compendium form by disseminating it to country research investigators who may potentially use the database. Feedback such as ease of use and appropriateness of content will be ascertained.
- WHO to send compendium template to the Funders' Forum participants, to gather comments for improvement (e.g. clarity, ease of use, etc.).
- TAG to link the compendium template to their annual survey of 200 funders, to expand the compendium and to keep it current.
- WHO to create and host a functional Compendium for R&D Funders' database.

Next steps and Way forward

All participants agreed on the usefulness of a TB Research Funders' Forum. The group strongly agreed on the need to broaden discussion topics and commit to holding regular fora as part of the global effort to facilitate and promote TB research at international and national levels, as outlined in the WHO End TB Strategy.

Suggestions on the theme and timeline for the next TB research funders' forum include:

- Hold a WebEx session to update participants on the status of the compendium, as well as to set the theme and agree on timelines for the next face-to-face meeting. This could take place in September 2016.
- Hold a two-day funders' forum meeting in Geneva early 2017: WHO proposes a tabletop discussion/exercise on the utility of using mathematical modeling to identify interventions that will have maximum impact on TB epidemic, and to use the outputs to make the case for research prioritization and investment. Case studies from three countries will be presented by WHO to lead the discussion. Key outcomes from the meeting would include feedback and the design and utility of such a tool for both funders and country-level stakeholders.