I. Background: Tuberculosis (TB), including highly drug resistant TB, is an enormous global public health problem and a public health emergency in Georgia. HIV/TB co-infection, the emergence and spread of drug resistant TB, and the intersection of TB and non-communicable diseases (NCDs, including diabetes mellitus and smoking) present major challenges to TB control globally. Georgia is one of the 27 countries with a high burden of multidrug resistant (MDR)-TB as designated by the World Health Organization (WHO). In order to enhance TB control in Georgia and globally, and meet the new WHO End TB Strategy goals, new tools are needed to enhance TB control. These include new and better drugs, new and better diagnostics, and an effective vaccine as well as better implementation and scale up of existing tools. A major barrier to improved research, treatment, and control of TB in Georgia is the scarcity of Georgian scientists and health professionals with the relevant research knowledge and expertise to carry out internationally recognized research that can be translated to improve public health practices in Georgia.

II. Purpose/Partners: The Emory-Georgia TB Research Training Program (EGTB-RTP) represents a partnership between Emory University in Atlanta (USA) and Georgian institutions in Tbilisi including the National Center for Tuberculosis and Lung Diseases (NCTLD) and the National Center for Disease Control and Public Health (NCDC); other collaborating institutions include the Infectious Diseases, AIDS, and Clinical Immunology Center (IDACIRC), Tbilisi State Medical University (TSMU) and the International School of Public Health at TSMU.

The EGTB-RTP is focused on providing didactic and mentored TB research training for promising Georgian investigators; the goal is to provide trainees and their institutions with the skills and capacity to carry out internationally relevant TB-related research (e.g., clinical and/or translational research, epidemiologic research, implementation science [sometimes also called operational research], behavioral/social sciences research, and laboratory based research). The EGTB-RTP is funded by a Global Infectious Diseases grant from the U.S. National Institutes of Health (NIH) Fogarty International Center.

III. Specific Aims of the program include:

1. Continue to build human capacity to conduct high quality TB-related research in Georgia to candidates with outstanding potential. This includes providing opportunities for research training in relevant laboratory, clinical, translational, epidemiologic, implementation science and behavioral/social science related research. Capacity building also includes continuing to support the ability for key Georgian institutions to provide in-country research training. Didactic training occurring in-country in through Master and PhD-degree programs by providing high quality, semester long, distance learning courses via real-time, web-based videoconferencing and intensive short courses in-country.

2. Build research capacity by providing mentorship and leadership training for former Fogarty trainees who go on to serve as in-country mentors for new trainees. Key goals include: a) pair Georgian mentors with a U.S.-based mentor to mentor new trainees; b) increase emphasis on in-country research ethics training and IRB development, c) establish a TB Research Unit at the NCTLD building capacity for clinical and translational TB research (e.g., capacity to conduct randomized controlled trials for TB vaccines and new drugs).
3. Focus research and training activities on enhancing capacity to conduct internationally recognized research on drug resistant TB and strengthen the public health infrastructure for control of MDR- and XDR-TB given that this is a urgent public health problem in Georgia. This research focus should also enhance the ability to translate research findings into public health policy in Georgia.

4. Expand the focus of the EGTB-RTP to include research and training at the intersection of TB and non-communicable diseases (NCDs) and risk factors for NCDs (i.e., TB-diabetes, TB-smoking, TB-mental health, and TB-nutrition). Given the convergence of infectious diseases with NCDs there is an urgent need to have multidisciplinary collaborations and integrated strategies that incorporate both TB and NCDs.

IV. Long-Term Training Activities. Long-term training is the most important component and focus of the EGTB-RTP given the program’s goal to train additional investigators who will increase the critical mass of investigators now emerging in Georgia at collaborating institutions. Trainees can be either graduate degree candidates or pursue training without formally enrolling in a degree program. Regardless of track chosen, all long-term trainees will develop a hypothesis driven research proposal to be carried out under the guidance of their dual Georgian-U.S. (Emory) mentoring team.

There will be 3 options or tracks for long-term training:

1) Postdoctoral research training including a graduate degree program. This option involves obtaining a graduate degree (e.g., MPH at the TSMU ISPH or other Georgian educational institutions). Postdoctoral trainees, including those with a MD or PhD degree, who are interested in obtaining further didactic training to provide a foundation for a career in TB-related or TB/NCD-related research are included in this track. Long-term trainees will have TSMU ISPH coursework (or course work at other Georgian institutions) supplemented by the three semester long Emory Master of Science in Clinical Research (MSCR) distance learning courses (Scientific and Grant Writing; Biostatistics; and Data Management) as well as intensive short courses and workshops and will have protected time for didactic and mentored research training. Opportunities for “sandwich” training (spending one semester in Atlanta at Emory University for advanced courses) is an option for selected trainees.

2) Postdoctoral research training opportunities through non-degree training. Training opportunities for long-term trainees include providing opportunities for research training in relevant laboratory, clinical, translational, epidemiologic, implementation science (operational research) and social science related research. These trainees will also take the three Emory MSCR distance learning courses (Scientific and Grant Writing; Biostatistics; and Data Management) as well as the in-country intensive short courses and workshops that are planned.

3) Supporting PhD graduate degree candidates. An option to support Fogarty trainees for a PhD degree at a Georgian institutions (e.g., TSMU or the David Tvildiani Medical University) for former or new EGTB-RTP trainees is another option. The PhD is an important credential for individuals who are interested in a permanent appointment at an academic institution in Georgia. The EGTB-RTP will provide mentored research training for those pursuing a PhD degree at a Georgian institution with the expectation that the dissertation thesis focus on TB or TB/NCD-related hypothesis-driven research. Candidates will also take the new EGTB-RTP distance learning course on “Advanced Data Management and Statistical Programming” as well as the in-country workshops and intensive short courses available to other trainees.
V. Support for Long Term Trainees
Those long-term candidates accepted into the EGTB-RTP will be supported for two years of didactic and mentored research training. The second year of support is dependent upon satisfactory performance in the first year of the program. Long term trainees accepted into the EGTB-RTP will receive:

- **Stipend support** to ensure that their professional time is protected for research and research training ($500 per month). New trainees must dedicate at least 50% professional time to the research training program (i.e., research and research training)
- **Tuition support**, including graduate degree programs at Georgian educational institutions and additional coursework delivered through real-time distance learning from Emory University
- **Multidisciplinary mentoring team** (including a Georgian mentor and an International mentor [e.g., in the United States at Emory University or other institution]
- **Technology support** (laptop computer, Emory email account and electronic resources)
- **Travel support to an international meeting** (minimum of one trip to each trainee during the two year research training period when presenting a first author abstract)
- **Opportunities to apply for an advanced in-country research training grant** ($12,000 USD) following the official two year training period
- **English language training** (written and oral); trainees must have a moderate to excellent proficiency in English at the time of application. English language training can be provided to trainees accepted into the program to enhance their English skills.

VI. Trainee Recruitment and Selection
Applications to the EGTB-RTP will be reviewed and ranked by members of the Training Advisory Committee (discussed below).

Eligibility requirements for long-term trainees:
1. Citizen of the country of Georgia or permanent Georgian resident
2. Fluency in English (written and spoken)—see comment above
3. **Be a postdoctoral trainee** (e.g., applicant with a MD, PhD, or PharmD degree) or **be a predoctoral trainee** (PhD or other doctoral graduate student)
4. **Strong desire for TB and/or TB/NCD-related research training through degree or non-degree didactic and mentored training.**
5. **Must be able to commit a minimum of 50% professional effort to the EGTB-RTP** (which includes research and research training).

Application Process:
Please note that all applicants should use Arial font (11 or 12) with one inch (2.54 cm) margins in completing their application. Applicants must adhere to the page limits described below.

1. Applications must be completed in the English language.
2. Applicant should submit the following materials as part of the application package:
   a) Application Face Page
b) **Abstract – 500 words maximum.** Provide an abstract of the entire application (candidate, interest in the program and career goals, and research plan).

c) **Personal statement** (1 page maximum on why you are applying to the program, what you hope to gain from the program and your long-term career goals). In addition, the applicant should indicate the degree of professional effort they will commit to the EGTB-RTP (must be at least 50% professional effort) and how they will spend whatever remaining professional effort that is not committed to the EGTB-RTP. The applicant should also describe in-country mentorship. All applicants accepted into the program will have an in-country (Georgian) mentor and an international mentor (e.g., Emory University faculty member or other U.S. or international mentor). The EGTB-RTP Program Directors will assist those applicants accepted into the program with assignment of an international mentor. An international mentor is not required at that time of application.

d) **Brief research concept proposal** (2-4 pages maximum) in which the candidate outlines their hypothesis-driven research concept that they propose to pursue during the training period. **Proposed projects must be feasible, focused and should be able to be completed within two years.** The EGTB-RTP supports research training; grant funds are restricted to research training and limited funds are available to support the trainee research project. For trainees who will also be pursuing graduate training during the period of EGTB-RTP support (e.g., PhD graduate students or Master students), this proposal could serve as the basis of their research thesis for their degree. Applicants to the program are encouraged to meet with the EGTB-RTP in-country program coordinator (see contact information below) and may also request a biostatistical consultation to assist them as they prepare this research concept proposal. The brief research proposal should be structured as follows:

- **Background.** Provide a brief description of the problem or issue to be investigated. This Introduction should convey sufficient information to justify the research project.

- **Hypothesis.** State the specific hypothesis to be tested. Be sure that this statement is written as a hypothesis.

- **Specific Aims.** These are the goals of the research project. Enumerate the specific aims (1, 2, 3, etc.). There should be a limited number of specific aims (typically 2-4) for the research project.

- **Research design.** Describe how the study will be designed and carried out. For clinical or translational research, please discuss sample size (include sample size calculations). If this is a pilot study that is not fully powered, please indicate this. Please briefly describe how the data will be collected and analyzed. If the project involves human subjects, describe briefly how patient confidentiality and/or consent will be addressed.

- **Literature cited.** This should employ standard citation methods. Referenced papers may be numbered and cited by number within the text. **References do not count toward the page limit.**

6) Transcript (graduate and undergraduate transcripts)

7) Three letters of support are required (one of the letters should come from the local mentor in Georgia; others may come from faculty in a graduate education program, potential mentors, current or former supervisors or faculty, or other individuals). **The letters of support should be submitted directly by the letter writer to the Lisa Sthreshley via email (lisa.christine.sthreshley@emory.edu).** The applicant should NOT receive or submit the letters of support.

Applicants may request a biostatistical consultation to assist them as they prepare their application. Please contact **Lisa Sthreshley (lisa.christine.sthreshley@emory.edu)** to make arrangements.

**Applications must be submitted electronically; applications may be submitted** by email (lisa.christine.sthreshley@emory.edu). **The deadline for receipt of applications is 16-November-2015.** It is anticipated that those accepted into the program will begin before the end of January 2016.

**VII. Review of Applications.**

All completed applications for long term TB research training will be reviewed by the EGTB-RTP Training Advisory Committee (TAC), which consists of a group of Georgian and U.S. physicians and scientists with expertise in the fields of tuberculosis, research, and public health. The TAC members will rate each application using an NIH style scoring system (1-9 where 1 is the best possible score and 9 is the worse) taking into consideration academic qualifications of the applicants and educational transcripts, personal statement and applicant's potential for a successful research career, letters of recommendation, relevance of the proposed training program to the TB research needs and goals, review of the applicants research concept proposal, the matching of an applicant’s research interests with those of the program’s priorities and faculty members who will serve as mentors, and the commitment of collaborating centers in Georgia to support the candidate when they complete the program. **The EGTB-RTP will offer long-term training positions to applicants based on their score and ranking by the TAC and the availability of funds.** Those promising individuals who submit excellent or promising applications but are not in a fundable range will be encouraged to resubmit the following year and/or to consider medium-term or short training opportunities. It is anticipated that up to 5 long term training positions are available in this application round. We anticipate that additional opportunities for long term research training will be available on an annual basis for the subsequent three years.

**VIII. Questions?**

Applicants are encouraged to contact the **EGTB-RTP Project Coordinator**, Lisa Sthreshley, MPH (lisa.christine.sthreshley@emory.edu) at Emory University, **Georgian Principal Investigator**, Nestani Tukvadze, MD (marikushane@yahoo.com) at the National Center for Tuberculosis and Lung Disease, and **U.S.-based Principal Investigator**, Henry M. Blumberg, MD (henry.m.blumberg@emory.edu) at Emory University with any questions about the EGTB-RTP program or application process and to inform them of their interest in the program.
The EGTB-RTP is supported by a NIH Fogarty International Center Global Infectious Diseases grant.