Background The Globally Relevant AIDS Vaccine Europe-Africa Trials (GREAT) partnership is an EDCTP-funded project that aims to foster collaboration between institutions in Europe and sub-Saharan Africa to build capacity among African clinical research centres (CRCs) for the design and conduct of HIV-1 vaccine efficacy trials.

Methods In January 2017, the University of Oxford (UOXF) and five CRCs in Kenya, Uganda and Zambia were awarded a 5-year grant for capacity building and to support conduct of an HIV-1 vaccine trial in different high-risk populations across Africa using cross-clade (conserved protein regions) T-cell vaccines. UOXF and CRCs embarked on activities to strengthen capacity of the CRCs for future efficacy trials. This included training, community engagement, cohort preparation and infrastructure upgrade.

Results In the first year, the African investigators at the CRCs collaborated on the development of a protocol aimed at assessing the safety and immunogenicity of the tHIVconsvX vaccines. In preparation for the planned vaccine trial, infrastructure upgrades were prioritised at all partner sites and this included building laboratory space and procurement of appropriate laboratory equipment. Planned infrastructure upgrades will also ensure that high-risk populations can be safely and confidentially included in HIV prevention clinical trials. Systematic community engagement was implemented at all sites, training in GCP/GCLP was provided and training is planned for nominated CRC staff to lead community engagement efforts.

Conclusion Improved infrastructure and the provision of targeted training will enhance future trials and increase the capacities of CRCs and staff to conduct quality trials in previously hard-to-reach populations. Early collaboration between investigators from European and sub-Saharan African institutions, with equal responsibilities in the protocol development process, established a meaningful partnership. EDCTP funding also offers a unique opportunity for capacity building.

Background Despite an efficient treatment and a widely-used vaccine, one third of the world’s population is estimated to be latently infected (LTBI) with Mycobacterium tuberculosis (Mt) and are at risk of progressing to contagious active tuberculosis. New TB vaccines and improved detection of LTBI are therefore urgently required for global TB control. As a first step towards these goals, a better understanding of host recognition and response to immunogenic Mt antigens is needed.

Methods In this study, interferon-γ release in response to the immunodominant antigens ESAT-6, TB10.4, Ag85A, Rv2031 and DesA1 was assessed by ELISPOT on PBMC from 55 past history cases, 55 healthy controls and 55 matched community controls, enrolled in a high-burden area.

Results ESAT-6 and PPD ELISPOT responses were higher in the TB patient group compared to both contacts and controls (p<0.05 respectively). These responses increased with time after recruitment in the contacts and fell after successful treatment in the patients consistent with the hypothesis that responses to these antigens reflect antigenic or bacterial load. However, the response to DesA1 was significantly lower in the controls compared to the contacts (p<0.05 respectively). Receiver Operating Characteristic curve analysis showed that PPD/ESAT-6 best segregated TB patients from the other groups, while DesA1 best segregated contacts from controls.

Conclusion The present study therefore identifies DesA1 as an immunodominant antigen with the potential to contribute to improved immunodiagnosis.