

With funding from the:



# TB Sequel

Post-TB lung disease: Morbidity burden and novel strategies for prevention, diagnosis and treatment in health systems

**Short description of the network project:**

The TB Sequel Network is a research consortium that was built on long-standing research collaborations. All of its partners are highly regarded for their expertise in tuberculosis (TB) research and have been collaborating successfully for more than 15 years. Since its inception in 2015, the TB Sequel Network has worked to advance knowledge and foster collaboration on post-TB lung disease (PTLD), a problem faced by more than half of TB patients despite the availability of microbiologic

treatment. The TB Sequel cohort of 1,560 newly diagnosed TB patients was the world’s first prospective research project of its size and duration, and it created a uniquely relevant scientific platform for comprehensively exploring the development of PTLTD. TB Sequel investigators co-organised the 1st International Post-Tuberculosis Symposium and were co-authors of the first publications to summarise PTLTD epidemiology and develop standards for diagnosis and clinical management in 30 years.



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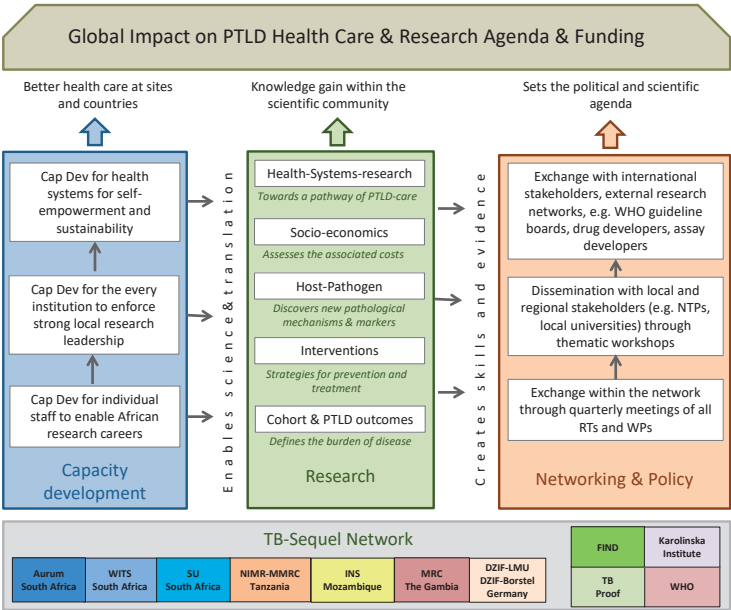


Instituto Nacional de Saúde (INS) – Maputo

**Challenge, approach and impact:**

The African continent is emblematic of tuberculosis (TB) as a global health emergency, with little known about the long-term sequelae. There is cumulative evidence for prolonged pulmonary morbidity and loss of longevity in former TB patients, which is caused by post-TB lung disease (PTLD), the result of the interplay between the infective agent and the host immune response. It is likely that TB patients in resource-constrained settings, who usually exhibit more extensive TB disease and are exposed to multiple co-risk factors of lung health, are left with substantial and chronic post-TB lung impairments.

The research activities proposed for the second phase of TB Sequel will interface directly with the established research platform infrastructure at all partner sites and address new and emerging research questions. We will make use of the existent TB Sequel cohort to provide a unique prospective analysis of the long-term PTLTD-related morbidity burden and related health outcomes for a period of up to 8–10 years after TB treatment cessation. We will also further expand on the findings of the established trial infrastructure and perform an HDT research trial that goes beyond preventing PTLTD to address strategies of PTLTD treatment. Finally, we will develop and implement initial clinical activities with an eye towards a local pathway of care for PTLTD together with national TB programmes, local health/non-communicable disease clinics, and other health system stakeholders. The wealth of newly generated and existing repositories will form the basis of a comprehensive host-pathogen research programme and several PTLTD-related socio-economic impact and cost analyses. We believe that ultimately our efforts will ensure personalised therapy and socio-economic interventions for patients with TB and/or PTLTD in the future.



TB Sequel Network activities: aims and interactions

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