

HERORAT FACTSHEET



Rats are highly intelligent and social creatures, with an extremely developed sense of smell. They are adapted to the environment and love to perform repetitive search tasks in exchange for a food reward. In Tanzania, the organization APOPO trains African giant pouched rats to save human lives in sub-Saharan Africa, by detecting explosives and Tuberculosis. As such they are affectionately called- HeroRATS.

APOPO's aim is to address the need for cheap, reliable and locally manageable demining detection services and Tuberculosis screening by training and providing HeroRATS. They are cheaper to breed, to feed, to train, to maintain and transport. HeroRATS are accredited according International Mine Action Standards (IMAS), just like mine detection dogs. They are lightweight, and therefore are not at risk to set off landmines by stepping on them. The use of HeroRATS speeds up humanitarian landmine clearance and reduces operational costs which are extremely prohibitive in Africa.

34 HeroRAT teams are currently deployed in Mozambique, offering villagers safe return to their homesteads, access to vital farmland, and opening doors for essential infrastructure. So far, HeroRATS have helped over 300 families in Mozambique return to their daily lives free from the terror of landmines.



As a spin-off application, APOPO started to train HeroRATS to detect pulmonary Tuberculosis. Tuberculosis was the first pathogen addressed as TB kills more youth and adults than any other single infectious disease in the world today. Yearly, up to 2 million people die worldwide from Tuberculosis. Sadly, the WHO prospects a 400% increase in Tuberculosis by 2015. In Tanzania, only 45% of active TB cases are detected (2006). There is an urgent need for a fast and cheap, first line screening tool, to detect suspected TB cases early.



By means of a microscope, a lab technician can process a maximum of 40 samples per day. A HeroRAT can screen the same amount in only 7 minutes. This approach provides new perspectives for prevalence screening and active case finding strategies. APOPO currently partners with 4 clinics in to offer TB screening to a population of over 500,000 in the poorest areas of Dar es Salaam, Tanzania. Weekly, they also identify an average of 5-10 patients with active TB that were missed by microscopy at the clinics.

At this stage, TB detection rats are in a research phase. Proof of principle has been provided, and the tool is now in optimization for operational use. Once validated, HeroRATS could screen vulnerable populations in slums, refugee camps, etc. Suspected TB patients can then be referred to the existing public health services for confirmation and treatment.

Local communities embrace the use of HeroRATS because they save human lives. Recently, the International Conference for the Great Lakes Region (ICGLR) in Africa has endorsed this appropriate technology for replication in 11 countries in the region. With HeroRATS, African countries depend less on foreign expertise for dangerous and difficult detection tasks.

www.HeroRAT.org