Background 

Trypanosoma brucei gambiense (Tbg) causes human African trypanosomiasis (HAT), one of the neglected tropical diseases targeted for elimination. Integration of diagnosis and case management into the general health system, sustainable monitoring of eliminated foci and development of safe and efficacious drugs, remain important challenges.

Methods 

The DiTECT-HAT project tackles these challenges. For passive case detection, we will determine the diagnostic performance and cost of rapid diagnostic tests (RDTs) performed on clinical suspects in peripheral health centres, whether or not combined with serological and/or molecular tests on filter paper done at regional reference centres. Cost-effective diagnostic algorithms with high positive predictive values might allow test-and-treat scenarios without the need for complicated parasitological confirmations. Secondly, health workers performing house to house visits in foci with very low HAT prevalence can easily collect blood on filter paper and send it to regional HAT reference centres for analysis. The feasibility and cost of diagnostic algorithms with RDTs, serological and molecular high-throughput tests for post-elimination monitoring will be determined. An appropriate threshold will be established to trigger active case finding to avoid re-emergence of HAT, without unnecessarily raising the alarm. Finally, the accuracy of neopterin and RNA detection as early test-of-cure will be determined in therapeutic trials.

Earlier treatment outcome assessment will speed up the development of new drugs for HAT, and improve management of relapses in routine care.

Results 

An update of ongoing and planned activities is given. The passive case detection sub-project is being set up in DR Congo, Côte d’Ivoire and Guinea. The inclusions for the early test-of-cure sub-project are ongoing in DR Congo.

Conclusions 

The proposed research will provide evidence to support policies for improved HAT diagnosis and patient management within a context of disease elimination, and will contribute to successful and sustainable HAT elimination.