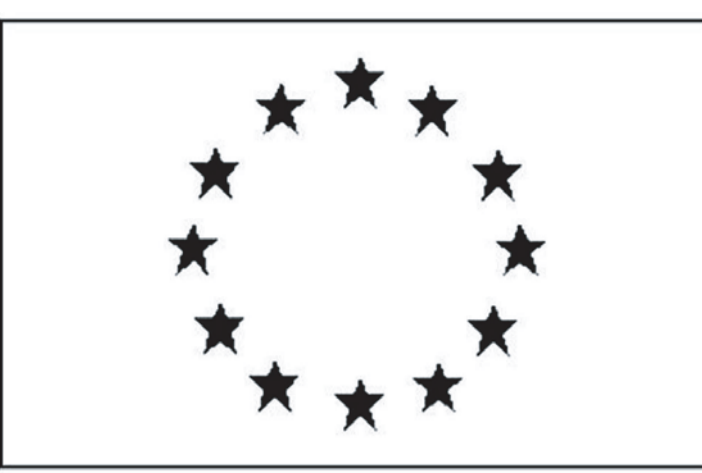




# TRYLEIDIAG: A Euro-African Co-operation Network

## Simplified and rapid molecular assays for diagnosis of Leishmaniasis and Human African Trypanosomiasis and Parasite (sub-)species identification



Human African Trypanosomiasis or sleeping sickness is caused by *Trypanosoma brucei gambiense* or *Trypanosoma brucei rhodesiense*. Leishmaniasis is caused by several species of *Leishmania* and is also endemic in Africa, sometimes in overlap with Human African Trypanosomiasis like in Sudan and Kenya. In the absence of prophylactics or vaccines, control of both diseases is in principle based on accurate diagnosis and effective treatment of patients. Since parasitaemia can be extremely low and parasite detection tests can only be performed by trained personnel, quite a number of actually infected persons remain undiagnosed and thus a reservoir by which the parasite stays in the human population.

The TRYLEIDIAG project aim is the development and the validation of novel point-of-care and laboratory tests for molecular Leishmaniasis and Human African Trypanosomiasis diagnosis based on specific sequences detection.



Tackling the disease through vector eradication is of limited use since it has only local and seasonal effects, it can have serious ecological impact and is barely sustainable.

In spite of those constraints, the African Union has launched an eradication programme of the tsetse fly with an implementation plan lasting the whole 21st century.



Treatment involves the use of (sub-)species specific and stage-specific drugs. International programmes aiming at the free treatment of patients have been launched over the last few years. Treatment leads to the recovery in about 95% of the cases treated. Yet, some of the used drugs are associated with severe adverse effects.

### THE MEMBERS

The Euro-African TRYLEIDIAG consortium comprises 9 partners from laboratories of excellence from four European and four African countries including one small and medium-size enterprise based in Belgium.

This 4-year consortium is co-ordinated by the Institute of Tropical Medicine in Antwerpen, Belgium with Dr. P. Büscher as scientific co-ordinator.

### THE APPROACHES:

The TRYLEIDIAG workplan is divided between complementary partners for laboratory and field work. Clinical samples will be collected in endemic areas within implicated countries for the different diseases. Thus, laboratory and field studies will allow the development and the evaluation of the diagnostic tests.

Partners conform to current legislation and regulations in the countries where the research is carried out and they have the approval of the relevant ethical committees.

### THE OUTCOMES:

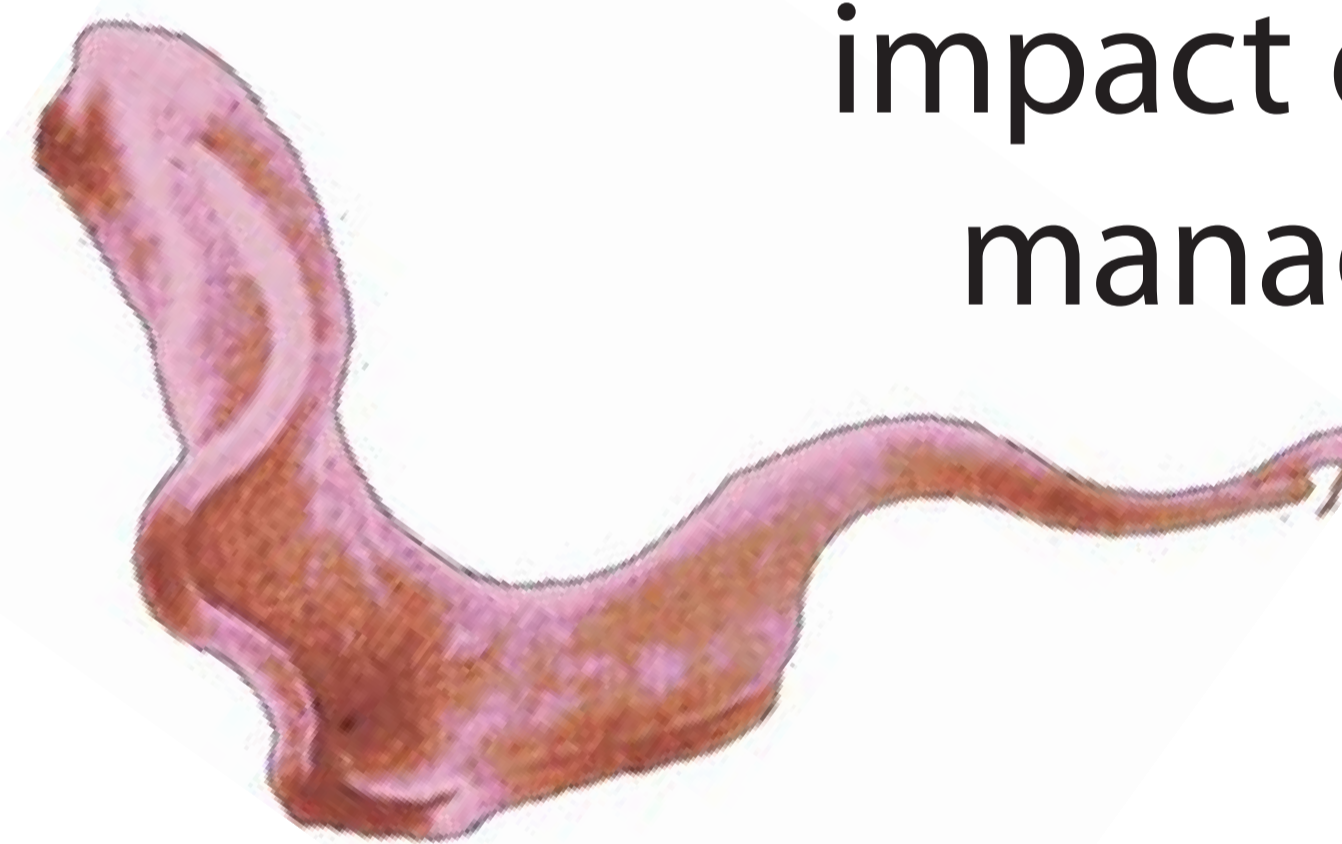
The TRYLEIDIAG network activities aim at developing new diagnostic tools that will have impact on disease control at three levels:

Improvement of disease and treatment failure surveillance since diagnostic tools will improve systematic screening of communities at risk.

Improvement of disease case-finding and case-management with appropriate treatment.

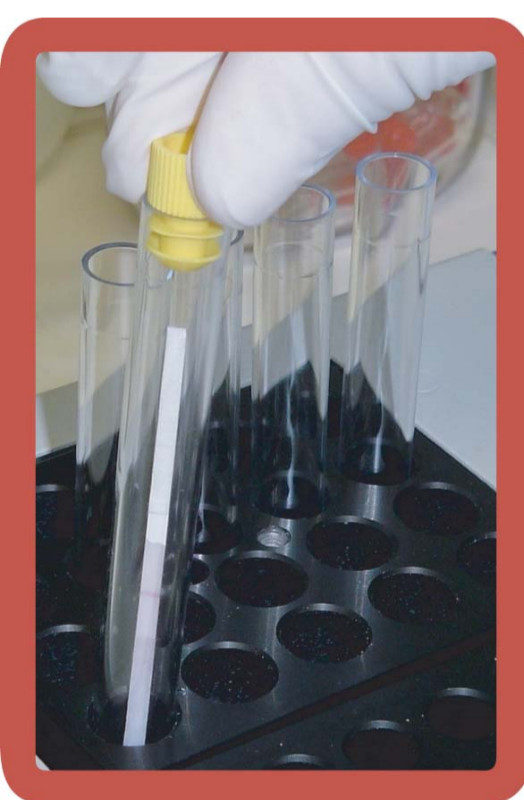
Improvement of efficacy monitoring in clinical trials since diagnostic tools will be highly specific and sensitive.

The TRYLEIDIAG network activities aim at developing new diagnostic tools that will have impact on disease management.



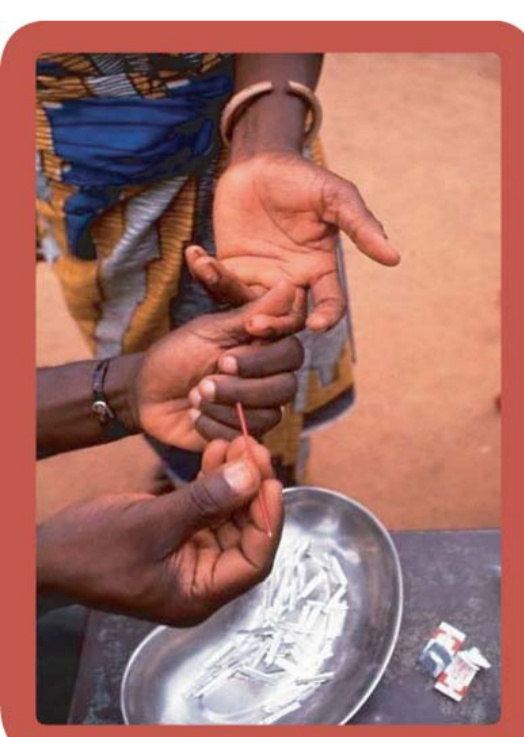
### INTERNATIONAL CO-OPERATION

TRYLEIDIAG is a Euro-African co-operation network. One of its main objectives is to contribute to strengthen institutional research in African countries through North-South Co-operation and regional exchanges allowing new dialogues, technology transfer and policy development. African partners are from Uganda, Kenya, Sudan and the Democratic Republic of Congo.



### DIAGNOSTIC TESTS DEVELOPMENT

The aim of the project is to develop and validate novel rapid and sensitive field and laboratory molecular tests for Human African Trypanosomiasis and Leishmaniasis diagnosis. These tests comprise point-of-care and laboratory formats for detection and identification of the parasites.



### BIOCLINICAL OPTIMIZATION

Protocols for sampling, preparation and storage of bioclinical material under field conditions will be established.

Bioclinical samples from patients will be collected for the development and evaluation of the diagnostic tests. This will be implemented after appropriate training of medical and laboratory personnel involved in bioclinical sample collection.

### CONTACT

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Inserm-Transfert  
France

Kenya Medical Research Institute  
Kenya

Koninklijk Instituut voor de Tropen  
The Netherlands

University of Khartoum  
Sudan

Makerere University  
Uganda

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