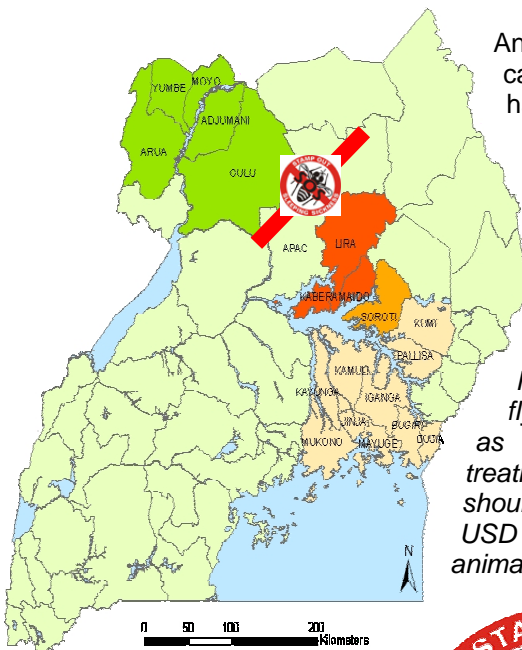


## PRESS KIT

# Stamp Out Sleeping sickness in Uganda

The academic and business worlds join forces in an emergency intervention to counter the recent and explosive spreading of the acute form of this terrible human disease in Uganda



An ambitious intervention scheme to fight against this disease – greatest cause of mortality, even ahead of HIV/ AIDS in some African countries - has been officially launched today (on October 11, 2006), in Kampala, Uganda.

The scheme has been set up and is jointly managed by the **Universities of Edinburgh (UK) and Makerere (Uganda)** together with the international veterinary laboratory **Ceva Sante Animale** (headquartered in France) and further supported by the pan European private equity firm **Industri Kapital (IK)**.

*Rather than "only" aiming to stop the increase of this acute human disease by treating the cattle reservoir and preventing the tsetse fly transmission, this project wants to prove its efficacy and its sustainability as the further cost of treatment for farmers should not exceed USD 0.02 (US\$ 37) per animal and per month...*



## PRESS CONTACTS

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## Sleeping Sickness...(Human African Trypanosomiasis)

### ***A very serious and emerging neglected under diagnosed Human Disease***

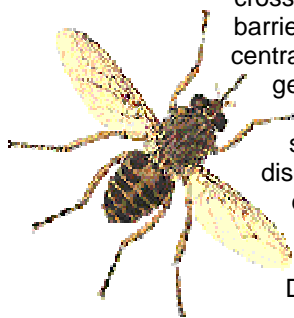
**Human African Trypanosomiasis (HAT)**, also known as **sleeping sickness**, is a vector-borne parasitic disease. The parasites concerned are protozoa belonging to the Genus *Trypanosoma*. They are transmitted to humans by the bite of an infected **tsetse fly** (Genus *Glossina*), which acquired its infection from feeding on animals harbouring the human pathogenic parasites or from an infected person.

Tsetse flies are found across Sub-Saharan Africa mainly in vegetation by rivers swamps and lakes.



*Trypanosoma* infecting blood red cells

The disease is transmitted through the bite of an infected tsetse fly. The trypanosomes multiply in subcutaneous tissues, blood and lymph. After a first "common" stage of the disease (fever, headaches, joint pains and itching), the second stage begins when the parasite crosses the blood-brain barrier and invades the central nervous system. In general this is when the signs and symptoms of the disease appear: confusion, sensory disturbances and poor coordination. Disturbance of the sleep cycle, which gives the disease its name, is an important feature of the second stage of the disease. Without treatment, sleeping sickness is fatal.



*Glossina* or "tsetse" fly (© IRD)

### ***Greatest cause of mortality, even ahead of HIV / AIDS...***

In 1986, experts from WHO estimated that some **70 million people lived** in areas where disease transmission could take place. **More than 100 people die everyday from sleeping sickness in Africa.**

During recent epidemic periods sleeping sickness was considered the first or second greatest cause of mortality, **even ahead of HIV/AIDS**, in those communities.

By 2005, surveillance had been reinforced and the number of new cases reported throughout the continent had substantially reduced; between 1998 and 2004 the figures for both forms of the disease together fell from 38000 to 18000 (source: *WHO*). The estimated number of cases is currently between **50 000 and 70 000** but, again, this does not reflect the true situation.

In Uganda, for every death due to Sleeping sickness in hospital, **about 12 additional cases** occur in the community, undetected.

### ***Uganda: the place where the two forms are about to get dramatically closer***

In the entire sub-saharan Africa, Human African Trypanosomiasis (HAT), as a disease, takes two forms, **acute and chronic**, depending on the parasite involved. Uganda has the dubious distinction of **being the only country where both forms exist.**

Chronic form, *Trypanosoma brucei gambiense* (T.b.g.) represents more than 90% of reported cases of sleeping sickness and may last for **years** without major signs or symptoms of the disease. When symptoms do emerge, the patient is often already in an advanced disease stage when the central nervous system is affected.

Acute form, *Trypanosoma brucei rhodesiense* (T.b.r.) represents less than 10% of reported cases. First signs and symptoms are observed

after a few months or weeks. The disease develops rapidly and **invades the central nervous system.**

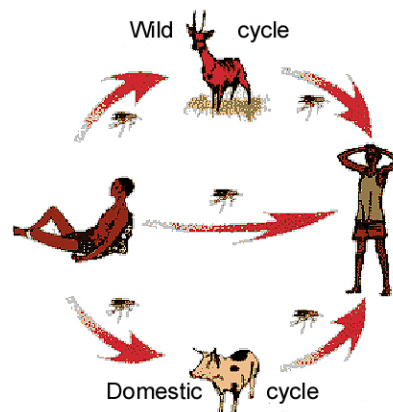
In Uganda, the chronic form of the disease occurs in north-western part, near the Sudanese border. Until recently, the acute form of the disease was confined to the south-east of the country. **But since the late 1980s, acute sleeping sickness has been spreading north and there is now a real risk that the two forms of disease will overlap.** The disease has spread to 5 new districts of Uganda in as many years. Overlap of the two diseases will complicate the already difficult task of diagnosing and treating sleeping sickness.

### ***Major animal reservoir of human parasite***

Other parasite species and subspecies of the *Trypanosoma* Genus are pathogenic to animals and cause **animal Trypanosomiasis** in many wild and domestic animal species (in cattle the disease is called *nagana*, a Zulu word meaning "to be depressed"). **Without being affected, animals can host the human pathogenic parasite *T.b. rhodesiense*** acting as long-term reservoirs of disease.

The northward spread of the disease is associated with movement of cattle carrying the human-infective parasites. It is only in recent years that new sensitive diagnostic tools have **revealed the importance of the cattle reservoir** of infection for sleeping sickness. It is now believed that most cattle in endemic areas carry the human-infective parasites: it has been calculated that a person is a thousand-times more

likely to acquire sleeping sickness, via the bite of a tsetse fly, **from a cow than from another infected person.**





## The "Stamp Out Sleeping sickness" (S.O.S.) Project

### Stop the acute form advance from south to north

Following years of insecurity and rustling, large-scale cattle restocking programmes have been carried out with cattle being moved from sleeping sickness endemic areas in the south-east of Uganda to restock districts further north. The disastrous consequence has been that cases of **acute sleeping sickness have now been detected in previously disease-free districts**, including Soroti, Apac and Lira. In itself that is worrying. **But even more worrying is the fact that the distance separating the two forms of the disease – previously a few hundred kilometres – is rapidly decreasing and very soon both forms of the disease could co-exist:** this would be catastrophic for already stretched local health services.

### Protecting Humans by Treating Animals

The classical way of tackling acute sleeping sickness is to detect and treat cases in people and to kill tsetse flies – by aerial or ground spraying or deployment of tsetse traps and screens. Detection and treatment of human cases is clearly essential, although it does little to prevent new cases arising. And all these methods of tsetse control have disadvantages, such as environmental acceptability, costs and sustainability. Recent research findings by scientists from **Makerere University** and the **Livestock Research Institute (LIRI)** working closely with colleagues from the **University of Edinburgh's Centre for Infectious Diseases, UK**, have led to the development of a promising new approach to the prevention of acute sleeping sickness – **treating cattle to prevent the disease in people.**

### Sustainable because beneficial for animals, protective for humans and... affordable for farmers!

It has been shown that treatment of around 86% of the cattle population with trypanocidal drugs can eliminate the human-infective parasites circulating in cattle. **If there are no sleeping sickness parasites in cattle there will be no new cases of sleeping sickness in people.**

Also, it has been shown that applying the insecticide *deltamethrin* just to those parts of the body where tsetse flies like to feed – the front legs – and where ticks accumulate – such as the ears – is as effective as conventional whole-body spraying, but at a fraction of the cost.

It can cost as little as USD0.02 (US\$ 37) to spray a cow using the so-called 'restricted application' approach: repeated every month or so this can provide effective control of tsetse, other biting and nuisance flies and ticks. The effects on animal's health are a great incentive for farmers, too!

### When the academic and business world join forces to help rural populations

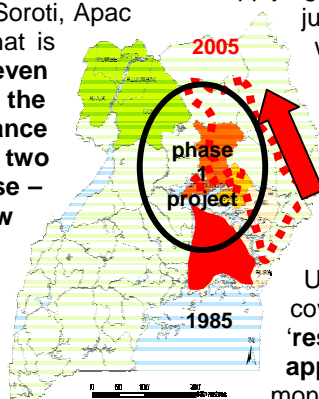
The Ugandan government is aware of the need for urgent action and a meeting convened by the World Health Organisation in late 2005 recommended the block treatment of cattle with trypanocidal drugs in the newly affected districts. But until recently no funds were available to enable this recommendation to be implemented.

Recognising the need for an emergency response, **CEVA SANTE ANIMALE**, a French based international veterinary pharmaceutical company, with financial support from their main shareholder, **Industri Kapital**, has now stepped in and agreed to fund the first phase of the block treatment campaign. The 'Stamp Out Sleeping sickness' (SOS) campaign aims to treat all cattle in the newly affected districts with trypanocidal drugs at no charge to

the farmers – in all around 220,000 cattle. At the same time farmers will be introduced to the benefits of the restricted application approach to spraying their animals with insecticide. **CEVA SANTE ANIMALE's** product range includes all the products needed to mount the campaign: **VERIBEN B12 L.A.** and **VERIDIUM** are trypanocidal drugs and **VECTOCID** is a spray formulation of deltamethrin. Another of IK's portfolio companies, one of the leading gardening equipment companies in Europe **Gardena AG**, is providing the sprayers for the spraying of the Vectocid. **Cooper Uganda** ensures the key distribution in the field to support this campaign.

By stemming the northward spread of acute sleeping sickness, the risk of the two forms of the disease overlapping should be prevented. Following CEVA/IK's kick-start to the SOS campaign, additional funding is now being sought to allow the campaign to continue sweeping southwards, eventually eliminating the scourge of acute sleeping sickness from Uganda.

**And, if this approach proves successful in Uganda, it could also be applied to other parts of Africa affected by acute sleeping sickness - perhaps one day eliminating this deadly disease from East and Southern Africa.**



### Phase 1 protocol detailed...

The phase 1 includes Kaberamaido, Lira and Apac districts

#### October – November 2006

8 teams of students and managers from Makerere University go to the field to treat the cattle by injecting a trypanocidal treatment (VERIDIUM® or VERIBEN® B12 L.A. according to the level of contamination) and making the first insecticide application (VECTOCID®).

Doses of insecticide are given to District Veterinary Officer to ensure the second insecticide application (following the "restricted application" method on cattle legs) by farmers.

#### December 2006 – January 2007

Demos on cattle markets and media messaging to the population are then carried on to make people sensitive to the problem and encourage them to follow the monthly insecticide application by purchasing doses of insecticide locally.

#### From February 2007 on

Controls will be carried on cattle 3 and 6 months later to state the re-infestation level, measuring the farmers' involvement in this method.

If results are significant, the phase 2 will be implemented in the rest of the country, aiming to treat 800,000 more cattle



# The "Stamp Out Sleeping sickness" (S.O.S.) Partners and Actors



**CEVA SANTE ANIMALE** is a multi-national pharmaceutical veterinary laboratory based in France, which designs, develops, registers, manufactures and sells veterinary medicines throughout the world. With a 2005 turnover of €271 million, the CEVA group is well recognised for its expertise in several specialised fields. The group employs 1770 employees (in its 38 international sites) and encourages each individual to live up to its 4 core values of **EXPERTISE, INNOVATION, SERVICES and TRUST**. A good example of this is Ceva Santé Animale's involvement in Africa where, for years, the company has invested in R&D to produce medicines to counteract tropical animal diseases such as trypanosomiasis. As a result, the Ceva group is able to supply a complete range of preventative and curative products such as VERIDIUM, VERIBEN B12LA and VECTOCID, which will make the success of this project a real possibility.

**Martin Mitchell** joined Ceva in 2003, and is currently the Regional Director, responsible for Southern and Eastern Africa. M. MITCHELL has been involved in the animal health industry in Africa since the early 1990's at which time he was responsible for Coopers business in the continent. Throughout this time, M. MITCHELL has been actively involved in the Uganda, where he worked closely with Cooper Uganda Ltd to help build their now extensive infrastructure

**Dr Hamadi Karembé** is a veterinarian who graduated from the veterinary school in Nantes, France. Dr Karembé is the head of international regulatory affairs within Ceva and also has additional responsibilities for a number of development projects. Dr Karembé was born and grew up in the tsetse-infested belt of Mali and as a result has been particularly committed to guide specific research commissioned by CEVA in the field of trypanosomiasis.



**INDUSTRI KAPITAL (IK)** is a European private equity firm with Nordic roots, managing close to 4 billion euros in fund commitments. Since 1989, Industri Kapital has acquired 61 European companies. IK is the major shareholder of CEVA SANTE ANIMALE, French based

international veterinary laboratory. IK saw an opportunity to also bring private equity investing methods and techniques to the project in addition to funding. Working together with trusted parties and ensuring local involvement IK is dedicated to maximizing the impact of this intervention.

**Christopher Masek** is a Partner of Industri Kapital having joined the private equity firm in 2000 as a Director responsible for France. He is a member of the Boards of Directors of Ceva Santé Animale, IDEX, SIA Holding International SA and Consolis SAS.

**Anne Holm Rannaleet** is a Partner of Industri Kapital and has been with the private equity firm since its inception in 1989. Ms. Rannaleet held the position of Finance Director until 1999, when she was appointed Director of Knowledge Resources, Information and Legal control. She is also a member of the Board of Directors of Ceva Santé Animale and the Chambre de Commerce Française en Suède (CCFS)



**MAKERERE UNIVERSITY**, with a student population of over 30,000, is one of the largest in East and Central Africa and its Faculty of Veterinary Medicine amongst the premier veterinary schools on the continent. Final year veterinary students, led by their lecturers, will be on the frontline of the SOS campaign, treating around 220,000 cattle during the two month operation.

**As. Professor John David Kabasa** is the Dean of the Faculty. Pr Kabasa is a Facilitator, Researcher and Consultant at Makerere University, Faculty of Veterinary Medicine in Uganda. After his PhD, he has acquired several postgraduate certificates in social skills and institutional development, Research management, Health Research for Development, Epidemiological Methods and Adapted Techniques, Tropical Animal production.

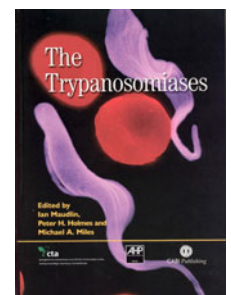
**Dr Charles Waiswa** is the Head of Department of Clinical Medicine, Head of Ambulatory Clinical Services, Makerere Vet School Senior lecturer, Programme Leader parasitological diseases with special emphasis on trypanosomiasis and cysticercosis and owns over 15 years experience in field and laboratory based animal trypanosomiasis research in Uganda. Dr Waiswa is the Programme co-ordinator and supervisor of international student teams and member of executive board of Faculty and University representative of COCTU, Uganda.



Staff at the **UNIVERSITY OF EDINBURGH** Centre for Infectious Disease – Royal (Dick) School of Veterinary Studies have worked closely with Ugandan colleagues from Makerere University and the Ministry of Agriculture, Animal Industry and Fisheries for over a decade researching sleeping sickness and trypanosomiasis developing this new approach to preventing sleeping sickness.

**Pr Susan WELBURN** is Professor of Medical and Veterinary Molecular epidemiology. With more than 20 years experience working on human sleeping sickness and zoonotic trypanosomiasis in domestic wild and animal populations, Prof. Welburn has ongoing research projects ongoing in Uganda, Sudan, Kenya, Zambia, Nigeria and Tanzania (in conjunction with the National Institute of Medical Research /World Health Organization /DFID /Wellcome Trust). The University of Edinburgh will provide diagnostic training and facilities for evaluation and monitoring of the activity.

**Pr Ian Maudlin** is the Director of the Centre for Tropical Veterinary Medicine, University of Edinburgh, Manager, DFID Animal Health Programme. Pr Maudlin has been Advisor on African trypanosomiasis, through membership of expert committees, to both WHO and FAO. Research career spans 30-year period working on African trypanosomiasis. Pr Maudlin is the editor in chief of major text: *The Trypanosomiasis*, published by CABI, 2004.



**Dr. Mark Eisler** (Veterinarian) is Head of the Section of Animal Health & Veterinary Public Health, CTVM. He is a veterinarian with an MSc in Tropical Veterinary Science, a PhD in Chemoprophylactic Control of African Bovine Trypanosomiasis and member of the European College of Veterinary Parasitologists. He has coordinated numerous research projects in East and Southern Africa, on the epidemiology and control of bovine trypanosomiasis and had responsibility for Research and Development Module of the WHO/FAO/IAEA/OAU-IBAR Programme Against African Trypanosomiasis (PAAT).