**Fresh insight into sleeping sickness**

**Discoveries about a drug used to treat sleeping sickness could pave the way for improved therapies.**

Scientists hope to develop alternatives to the drug suramin, which has been in use for almost a century but has several shortcomings.

Suramin is effective only in early stages of infection and has to be injected, making it difficult to administer.

The drug is also associated with side-effects including vomiting and adrenal gland failure.

**Popular treatment**

University researchers looked at understanding how suramin targets the parasite - Trypanosoma brucei - that causes sleeping sickness.

They found that the drug binds to a particular protein in the parasite’s cells, preventing it from functioning and leading to the parasite’s death.

The scientists say alternative drugs could be developed to target this protein.

In addition, suramin also binds to the corresponding protein in human cells, causing side-effects - which any new drug could be designed to avoid.

**Widespread condition**

Sleeping sickness is spread by the bite of the tsetse fly and infects people and animals in sub-Saharan Africa.

Some 30,000 people are infected, with millions more at risk.

Suramin is also used to treat leishmaniasis, which is spread by sandflies in Africa, India and South America.

The study, funded by the Medical Research Council, the European Commission, the Wellcome Trust and the Biotechnology and Biological Sciences Research Council, was published in the Journal of Biological Chemistry.

By pinpointing the protein that seems to be at the heart of treating sleeping sickness and combining this with modern techniques to design drugs, we hope to contribute to improved treatments for this devastating disease.

**Professor Malcolm Walkinshaw**

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