

Research targets debilitating disease

Fighting disease in the developing world is a struggle with the production and supply of vital medication often proving commercially unviable.

But now a group of Murdoch University researchers has found a way to collaborate with the industry and bring much needed medical relief to the third world.

Murdoch parasitologist Professor Andrew Thompson is working with start-up biotechnology company Epichem on developing effective drugs against the so-called sleeping sickness.

The success of their research has been recognised by the international funding agency Drugs for Neglected Diseases Initiative which will allow their drug development program to progress to the trial stage.

The major life-threatening disease affects millions of people and livestock in Africa. It is caused by the parasite *Trypanosoma* that is transmitted to domesticated animals and humans by the tse-tse fly, resulting in the onset of coma and eventually death.

The re-emergence of sleeping sickness in Africa, the lack of drugs to treat it, growing evidence of resistance and the lack of vaccines, all reinforced the need for new drugs.

Professor Thompson said sharing knowledge, expertise and funding with industry chemists meant the life-saving drugs could reach sick people in poor countries faster. But it also opened commercial opportunities in the developed world.

"If we develop a drug that's effective against sleeping sickness in Africa, there are very closely related parasites that are affecting an increasing number of pets throughout Europe. And these parasites can also affect humans," Professor Thompson said.

"If the drugs we are developing are shown to be really good against sleeping sickness in Africa we can then commercialise the drugs in the animal health market. So, on the one hand we have that small market in Africa but also a very lucrative potential market in the animal health area."

Epichem managing director Wayne Best said the highly interactive collaboration between the industry and the university opened tremendous opportunities. "This has enabled us to gain an in-depth understanding of the issues involved in antiparasitic drug discovery and to hone our research towards the development of some of the world's most promising advances in the treatment of diseases such as sleeping sickness," Dr Best said.



Left to right: Epichem managing director Wayne Best, research assistant Tanya Armstrong and Professor Andy Thompson.