

# Vaccine hope in fight against the parasites

SOME of the world's poorest people could be protected from devastating diseases thanks to a breakthrough by Scottish scientists.

Researchers have discovered fresh insights into the way parasites beat the human immune system.

The findings should aid development of vaccines for diseases which affect around 200million sufferers in Africa, Central America and south-east Asia.

Elephantiasis, which causes huge swelling of the legs and lower body, and river blindness are both spread by black flies and mosquitoes. No vaccines exist and sufferers can be left disfigured and disabled.

A team from Edinburgh University has now found parasites quickly adapt their survival strategies depending on how strong a host's immune system is. When the body's defences are strong, parasites

By **Kirsteen Paterson**

increase their growth rate to produce more offspring earlier, allowing the disease to spread.

The results mean conventional vaccines may encourage the parasites to grow stronger. The work is based on experiments on mice and further work is needed to discover if the results apply to other mammals, including people.

Dr Simon Babayan said: 'Most vaccines mimic the natural immunity of people but our study suggests this approach could be counterproductive for some parasitic diseases.'

'We hope this finding will help inform the design of future vaccines against these infections and that it will encourage clinical trials to carefully assess their impact on parasite reproductive strategies.'

