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## Chagas disease

### Kiss and kill

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#### A deadly and neglected plague

A HUNDRED years ago Carlos Chagas, a young Brazilian doctor, precociously pulled off the unique feat of completely describing a previously unknown disease. He showed how the often-fatal infection that now bears his name is transmitted as a single-celled parasite which is carried by insects that typically bite their sleeping victims on the face (and are thus known as “kissing bugs”). This month the centenary of his discovery will be marked with a scientific conference in Belém, in the Brazilian Amazon, while an opera about Dr Chagas opens in July in Rio de Janeiro.

The publicity is welcome. Chagas disease kills more Latin Americans than any other parasitic illness. But it remains little known. About 18m people suffer from it, of whom roughly a third will develop fatal heart and bowel problems. The data are woolly, but by one estimate it is responsible for the loss of more than two and a half times as many years of healthy life in the region as malaria, leprosy, bilharzia and leishmaniasis combined.

Why is more not done? Partly because the symptoms of Chagas can take decades to develop. In Argentina, for example, the incidence of Chagas has been rising in the northern provinces in the hot Gran Chaco since 2001. But Argentines worry much more about a recent outbreak of dengue fever which has reached Buenos Aires.

Donors wrongly think of Chagas as yesterday's cause and have cut budgets to combat it. There have indeed been improvements, especially in South America's southern cone. Large-scale spraying with insecticide of the walls and thatched roofs of adobe houses where the kissing bugs live has reduced their numbers.

But not everywhere: in Bolivia up to 70% of children in rural areas have Chagas. Because the bugs themselves can pick up the parasite when biting an infected person, the southward flow of Bolivian migrants has contributed to the rise of the disease in northern Argentina, where up to a quarter of rural children are now infected. Central America is blighted, too. Chagas has returned to Mexico, especially its poor southern state of Chiapas.

Since the 1970s two drugs have been available that can cure Chagas, but only reliably so in its early stages. Prevention is crucial. A project to improve housing and awareness of the disease, funded by Canada's International Development Research Centre, halted infection in San Francisco de Opalaca, a poor district of Honduras, as well as curing 87% of childhood cases.

But there are new threats. Tania Araújo-Jorge of the Instituto Oswaldo Cruz, a research centre in Rio de Janeiro, points out that bugs in mud huts in the Chaco have become resistant to commonly used pesticides. In Brazil, insect faeces in homemade fruit juice have spread the disease. Chagas is also springing up in the Amazon, where different insects are acting as vectors, she says. For the first time Chagas also seems to have moved to urban areas, such as Arequipa, Peru's second city.

Coming up with a better cure will not be easy. Latin America's pharmaceutical market is less than a tenth of the size of that of the United States and most Chagas sufferers are poor and live in remote areas. So a joint effort by donors, governments and private researchers may be needed.