

Brazilian Scientists Discovery Might Help Find Cure for Deadly Chagas Disease

Contributed by Carla Almeida
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Researchers in Brazil have located the 'genetic factory' the parasite that causes deadly Chagas disease uses to multiply.

They say the findings could help them to develop new ways of treating the disease, which currently infects 16-18 million people in Latin America and kills about 50,000 every year.

The parasite, *Trypanosoma cruzi*, is a single-celled organism that usually reproduces asexually, by dividing into two identical cells.

To do this it first makes a complete copy of its genetic material, found in the cell nucleus. Its genes then produce the proteins needed to divide in two.

The researchers at the Federal University of São Paulo have found the specific region in the nucleus where this process takes place.

Lead researcher Sergio Schenkman says the special 'spliced leader' genes that coordinate the process move to a region near the center of the nucleus. This then becomes like a 'factory', churning out proteins.

Although the mechanism was already known, the location was not. "In this study, we discovered where the factory is installed," he said.

This discovery, along with a better understanding of how the process works, could be key to the development of new drugs to treat the disease.

"It could give us ideas about how to interfere in the process," says Schenkman, whose team is now focusing on ways to do this.

The findings were described in the current issue of *Pesquisa Fapesp*, a Brazilian science magazine. - www.revistapesquisa.fapesp.br.

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