

A researcher identifies the parasites responsible for Chagas and Leishmaniasis epidemics

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Parasites must be correctly identified before the correct treatment is introduced. To do so, we need a fast and cheap technique that enables us to obtain the necessary results in our studies, especially in under developed countries where there are no proper infrastructures.

The Department of Parasitology of University of Granada (Spain), and the researcher Isabel Rodríguez González have submitted a thesis that analyses for the first time new isolated parasites: Leishmania and Trypanosoma in Peru, Mexico and Spain. These parasites are responsible for diseases such as Chagas – which affects at least 18 million people in South America – and Leishmaniasis – which affects around 12 million people throughout the world. The World Health Organization has recognised these diseases as a public health problem.

This study has compared these parasites with reference strains, by using biochemical and molecular techniques. Thanks to these techniques, the researcher was able to identify which groups these isolated parasites belong to.

No medical treatment

The researcher pointed out: “There is no specific treatment yet. Medicines that are used may have serious consequences. Their efficiency varies, because they are long and expensive treatments often associated with toxic effects.” Some species of these parasites need no treatment, others do.

“If we want to find a specific treatment, the first step we have to take is to correctly identify these species.” This is also of epidemiological value to understand parasite distribution, and is aimed at discovering specific control measures.

Another important feature of the study is the usefulness of one of the techniques used: PCR (Polymerase Chain Reaction). It is a relatively simple technique, cheap in comparison with others. PCR makes it possible to identify the isolated parasites in field studies.

The results of the study have already been published in some of the most important scientific journals in the field of Parasitology, such as Parasitology Research, Experimental Parasitology or FEMS Microbiology Letters.

Source: Universidad de Granada

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