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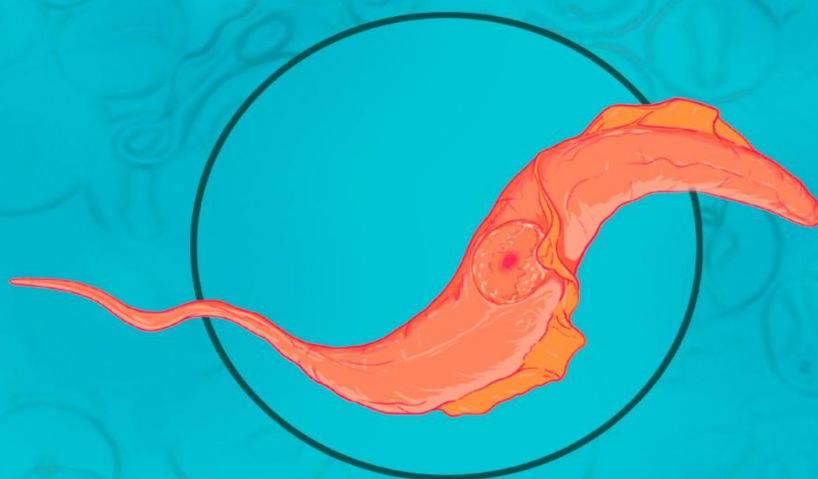
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Instituto de Biología

Memorias



IX

Curso Internacional de
Tripanosomátidos

Simposio de Biología
Molecular de la
Enfermedad de Chagas



**UNIVERSIDAD
DE ANTIOQUIA**

Facultad de Ciencias Exactas y Naturales

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PRESENTATION

IX SYMPOSIUM ON MOLECULAR BIOLOGY OF CHAGAS DISEASE IX SIMPOSIO DE BIOLOGÍA MOLECULAR DE LA ENFERMEDAD DE CHAGAS

The Symposium on Molecular Biology of Chagas disease and the international course on the molecular biology of Trypanosomatid is an initiative started in 2012 by several Latin American groups from five countries (Argentina, Chile, Colombia, Venezuela, and Uruguay). The main goal of this initiative was to build a network aiming to understand the problem of Chagas disease and others trypanosomiasis from different aspects. In this context, one of the main objectives of the network is to contribute to the formation of advanced human resources. In this context, we have been consistently organizing courses that have contributed to the formation of graduate students, and young researchers and promote the interaction of group leaders from institutes of South America working on Trypanosomatid that causes relevant human diseases. These courses constitute the appropriate environment to discuss current topics in molecular biology and pathogenesis of Chagas disease and other neglected diseases, searching for common interests, giving the opportunity to promote collaborations among groups from different countries of South America, and increasing the chances for emerging innovation in this field.

In 2022, the IX version of this symposium and course will be performed at Universidad de Antioquia, Medellín, Colombia. This year, the emphasis will be focused on the genome, transcriptome, proteome, metabolome, and functional genomics, as well as on relevant aspects of the cell biology of Trypanosomatids, all involved in host-pathogen interactions. In addition, the course will provide practical training, including genomic edition using the CRISPR-Cas9 system, molecular and cellular biology methods, and bioinformatic analysis of genomes and transcriptomes.

I would like to highlight the participation of professors from different countries (Argentina, Brazil, Chile, Spain, Mexico, Colombia, Uruguay, and Venezuela). Moreover, we will have students from different countries, who were supported mainly by UNU-BIOLAC. This year, we want to thank to Grupo La Rabida for supporting most professors, and other companies such as INNOVALAB, ISLA, NOVAVENTA, Post-graduate Biology Program, CODI, and Corporación de Patologías Tropicales for the help during all the organization.

Finally, this meeting is an excellent opportunity to create the Latin American Network in Molecular Biology of Chagas Disease.

Omar Triana Chávez

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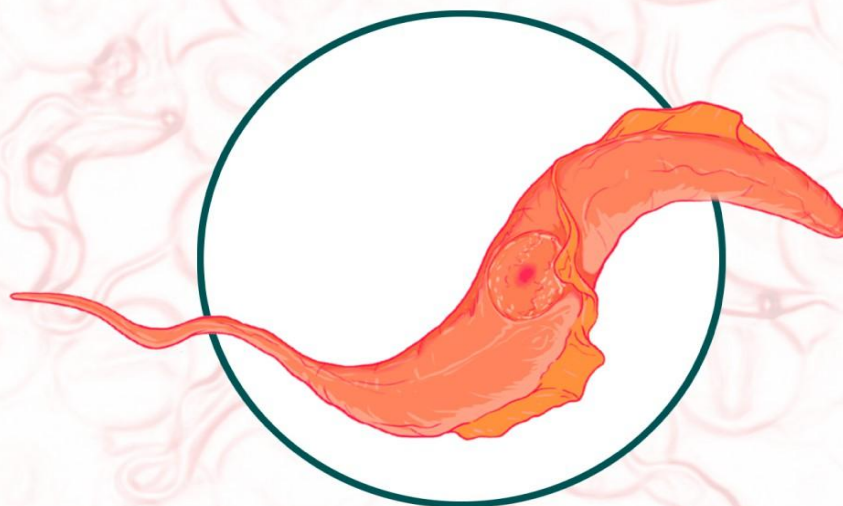
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**ABSTRACTS POSTERS
IX SYMPOSIUM ON MOLECULAR BIOLOGY OF
CHAGAS DISEASE**

**RESÚMENES CARTELES
IX SIMPOSIO DE BIOLOGÍA MOLECULAR DE LA
ENFERMEDAD DE CHAGAS**



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Corporación Académica para el Estudio
de Patologías Tropicales

Relationship between chemical composition, botanical origin and antiparasitic activity of Costarrican propolis against *Trypanosoma cruzi*

Determinación de la capacidad antiparasitaria contra *Trypanosoma cruzi* de propóleos costarricenses y su relación con su composición química y su origen botánico

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Chagas disease affects millions of people throughout Latin America; more than 300,000 new cases and 12,000 deaths are reported yearly. Due the high incidence, social and economic impact, the search for efficient, effective, and safe treatments for this disease has become a priority in the region. Based on previously published studies, it has been determined that some propolis extracts with polyisoprenylated benzophenones (BPI), such as nemorosone, have important trypanocidal activity. Furthermore, BPIs with activity against *Trypanosoma cruzi* can be found in floral resins of species of the genus *Clusia* in the southern region of Costa Rica. Therefore, this study proposes to evaluate *in vitro* and *in vivo* the antiparasitic effect of propolis containing BPI from the Southern Region of Costa Rica in the search for novel molecules that could be used as a potential treatment for chronic experimental trypanosomiasis. We hypothesize, that propolis is a better source for a wide range of concentrated BPIs than the original botanical source. For this study, 20 samples of propolis from the southern region of Costa Rica were taken from 10 randomly selected apiaries. The samples will be purified using medium pressure chromatographic techniques (MPLC) and the chemical composition will be determined by HPTLC (high-performance thin layer chromatography). At the *in vitro* level, we will work with the 3T3 cell line to evaluate the cytotoxicity of the compounds. The cytotoxicity and selectivity will be tested in the *T. cruzi* clone Dm28c. We also propose to validate the safety and efficacy of the selected compounds *in vivo* in C57B6/J mice.

Keywords: *Trypanosoma cruzi*, propolis, nemorosone, floral resins

