WORLD LEISH 7

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# Content

# 1. WELCOME TO THE WORLDLEISH7

Every four years, leishmaniacs from around the world gather in WorldLeish to discuss the latest advancements around these neglected tropical diseases and the seventh version was not an exception. In 2022, we had the participation of around 700 people, from 47 countries. Also, we had a great response from 536 students and professionals from around the world who sent us their abstracts to be part of the event as a poster or oral communications presentation and we are glad to say that we counted 195 oral presentations and 341 posters.

The experience and knowledge of the 210 speakers enriched the 44 Symposia, 8 Round Tables, 4 Special Meetings, 5 Plenary talks and 4 Successful stories that took place in those 6 days.

For Colombia and specifically the University of Antioquia, it was an honor to be the host of this Congress. And, for PECET, is a recognition for its almost 40 years of effort, research and hard work to treat leishmaniasis.

I would like to express my gratitude for your participation in this seventh version of the congress. Thanks to the knowledge and contributions, of all participants, it has been a complete success.

We know that it was not easy at all, however seeing all of you in Cartagena filled us with deep pride for the great challenge undertaken and the achievement reached.

May these events strengthen our "leishmaniac" spirit and recharge us to continue working in favor of this NTD.

Thank you very much.

With the expression of my admiration and respect.

Ivan Dario Vélez
Chair WorldLeish7

# 2. GENERAL SCHEDULE

| MONDAY August 1st | | Time | TUESDAY August 2nd | WEDNESDAY August 3rd | THURSDAY August 4th | FRIDAY 27 August 5th | Time | SATURDAY August 6th |
|---|---|---|---|---|---|---|---|---|
| | | 7:00 - 8:00 | REGISTRATION | REGISTRATION | REGISTRATION | REGISTRATION | | |
| | | 8:00 - 9:00 | PLENARY TALK #1 | PLENARY TALK #2 | PLENARY TALK#3 | PLENARY TALK #4 | 8:30 - 9:30 | PLENARY TALK #5 |
| | | 9:00 - 9:30 | SUCCESSFUL STORY #1 | SUCCESSFUL STORY #2 | SUCCESSFUL STORY #3 | SUCCESSFUL STORY #4 | 9.30 - 10:00 | COFEE BREAK |
| | | 9:30 - 10:00 | COFEE BREAK | | | | 10:00 - 11:30 | SPECIAL MEETING #4 |
| | | 10:00 - 11:30 | SATELITE SYMPOSIUMS (sessions 1 - 5) | SATELITE SYMPOSIUMS (sessions 12-16) | SATELITE SYMPOSIUMS (sessions 23-27) | SATELITE SYMPOSIUMS (sessions 33 - 38) | 11:30 - 12:00. | AWARDS |
| | | | | | | SPECIAL MEETING #3 | | |
| | | 11:30 - 13:00 | SATELITE SYMPOSIUMS (sessions 6 -11) | SATELITE SYMPOSIUMS (sessions 17 - 22) | SATELITE SYMPOSIUMS (sessions 28 - 44) | SATELITE SYMPOSIUMS (sessions 39 - 44) | | |
| | | | | | SPECIAL MEETING #2 | | | |
| | | 13:00 - 14:00 | LUNCH | LUNCH | POSTER PRESENTATION Session 3 | LUNCH | 12:00 - 13:10 | CLOSING LECTURE |
| 14:00 - 19:00 | REGISTRATION | 14:00 - 15:30 | SPECIAL MEETING #1 | ROUND TABLE (1 - 4) | LUNCH/ FREE AFTERNOON | ROUND TABLE (5 - 8) | 13:10 - 13:30 | CLOSING REMARKS |
| | | 15:30 - 16:30 | ORAL COMMUNICATIONS (sessions 1 - 7) | ORAL COMMUNICATIONS (sessions 15 - 21) | | ORAL COMMUNICATIONS (sessions 29 - 35) | | |
| | | 16: 30 - 17:30 | POSTER PRESENTATION Session 1 | POSTER PRESENTATION Session 2 | | POSTER PRESENTATION Session 4 | | |
| 17:30 - 18.00 | OPENING SESSION | 17:30 - 18:00 | COFEE BREAK | | | COFEE BREAK | | |
| 18:00 - 19:00 | INAUGURAL LECTURE | 18:00 - 19:00 | ORAL COMMUNICATIONS (sessions 8 - 14) | ORAL COMMUNICATIONS (sessions 22 - 28) | | ORAL COMMUNICATIONS (sessions 36 - 41) | | |
| 19:00 - 20:30 | WELCOME RECEPTION | | | | | | | |

# 5. POSTER

## P3-046.1: SMALL MOLECULES TARGETING *Leishmania braziliensis*: POTENTIAL TARGETS FOR CHEMOTHERAPY

**Leslye T. Avila[1], Laíse B. Oliveira[1], Hernane Barud[2], Jair L. Siqueira-Neto[3,4], Scott E. Schaus[5], Lauren E. Brown[5], Camila I. de Oliveira[1,6]**

[1]Instituto Gonçalo Moniz, Fiocruz-Bahia, Salvador, , Brazil; [2]Universidade de Araraquara, Uniara, Araraquara, SP, Brazil; [3]Skaggs School of Pharmacy and Pharmaceutical Sciences, University of California, San Diego, CA, USA; [4]Center for Discovery and Innovation in Parasitic Diseases, University of California, San Diego, CA, USA; [5]Center for Molecular Discovery (BU-CMD), Department of Chemistry, Boston University, Boston, MA, USA; [6]Instituto Nacional de Ciência e Tecnologia em Doenças Tropicais (INCT-DT), Salvador, Bahia, Brazil

Cutaneous Leishmaniasis (CL) caused by *L. braziliensis* presents as several clinical forms, which range from a localized ulcerated lesion to disfiguring lesions in mucosal areas. *L. braziliensis* can also cause disseminated leishmaniasis, a severe form of disease that frequently presents with mucosal involvement. CL affects 1.5 million people worldwide, and the current first line treatment are pentavalent antimony compounds that present toxicity and are subject to parasite resistance, making it evident the need for better therapeutical options. One of the challenges in the development of novel antileishmanial compounds is achieving potent activity against the intracellular stage of the parasite, the stage present in the mammalian host, without harming the host cell. Previously, we identified a compound series that displayed effective antiparasitic activity against *L. braziliensis*. Herein, we explored these compounds and evaluated their effectiveness employing murine macrophages, followed up by experiments *in vivo*. Macrophages infected with *L. braziliensis* and exposed to the compound series in a dose dependent manner showed that molecules Cpd1 and Cpd2 reduced the percentage of infected cells and the number of intracellular amastigotes in a significant manner. Similar results were obtained upon infection with *L. major* and both compounds also did not

exhibit cellular toxicity. Parasite killing was accompanied by an increase in the production of TNF and superoxide and both molecules are associated macrophage effector functions. Lastly, in a pre-clinical mouse model of CL caused by *L. braziliensis*, we observed that topical application of Cpd1, in gel-based form employing bacterial cellulose, impaired lesion development and significantly reduced parasite burden. These results indicate that this compound series can be further explored for the development of novel chemotherapeutic alternatives for CL caused by *L. braziliensis,* the causative agent of localized, mucosal and disseminated leishmaniasis.

**Keywords** TREATMENT; CHEMOTHERAPY; BIOCURATIVE

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