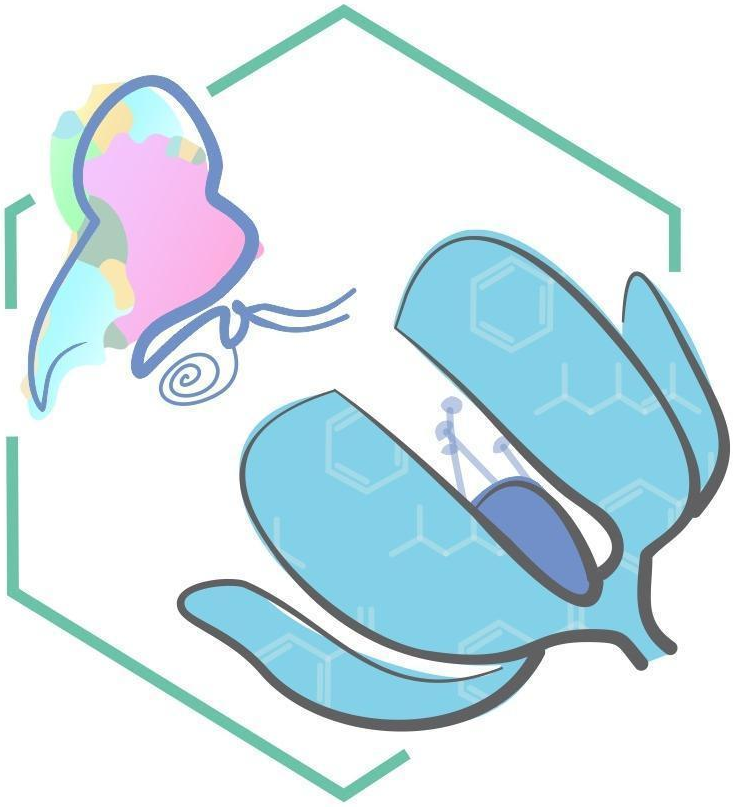

VII CONGRESS OF THE LATIN AMERICAN ASSOCIATION OF CHEMICAL ECOLOGY

BUENOS AIRES 2023

ABSTRACT BOOK

4 – 7 DECEMBER, 2023

CONTENT TABLE

WELCOME LETTER

Distinguished guests, esteemed colleagues, and fellow enthusiasts of Chemical Ecology,

With immense pleasure, we welcome each of you to the VII Congress of the Latin American Association of Chemical Ecology (ALAEQ), in Buenos Aires, Argentina.

ALAEQ's mission to promote interactions and foster collaborations among chemical ecologists across Latin America has been instrumental in advancing our understanding of the intricate and fascinating world of chemical communication in the natural world. Over the past decade, our biannual meetings have served as a beacon of knowledge and innovation, providing a platform for researchers to share their discoveries and engage in stimulating discussions.

For the first time, there are more than 200 participants in a meeting of our association. We are honored to have an esteemed lineup of 8 plenary speakers who will grace us with their insights and expertise, providing us with a global perspective on the latest advancements in the field. Many thanks to all of them for having accepted our invitation.

A total of 10 symposia will be held during the congress, addressing different topics within the Chemical Ecology. We want to acknowledge all the symposium organizers for their hard work and for securing such an outstanding group of speakers. We will have 25 oral presentations, and 2 poster sessions on Monday and Tuesday evenings, with 93 posters. For the first time in our meetings, we will have a round table with companies from the private sector to discuss how Chemical Ecology research can be transformed into products that reach the market.

Thanks to Adali Pecci, director of the IFIBYNE, and other members of the board for their support and for providing us with access to this auditorium for our event. We would like to express our sincere gratitude to the University of Buenos Aires, Agencia Nacional de Promoción de la Investigación, el Desarrollo Tecnológico y la Innovación, The International Society of Chemical Ecology, The International Brain Organization, the Company of Biologist, Centro Cultural Español en Buenos Aires, and companies for their generous financial support of this event: Syntech, ISCA, Sin-Ethsu, Bedoukian, M2i Group, Pacific Biocontrol, Beeflow and Vassays. Their contributions have been instrumental in enabling us to host this congress.

We extend our gratitude to all members of the Scientific Committee who carefully reviewed the abstracts, ensuring the high scientific quality of the congress. Additionally, we express our sincere appreciation to the volunteers for their dedication, to the ALAEQ Board for their support and assistance and Alejandra Bernal for this fantastic logo.

We once again extend a warm welcome to all of you. We are incredibly grateful for your presence and look forward to sharing this enriching experience.

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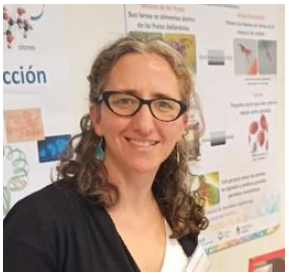

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P92 - Cuticular hydrocarbon profiles of honey bees (*Apis mellifera*) change after parasitized by *Nosema ceranae* in hives treated with amitraz

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Cuticular hydrocarbons (CHC) are key-essential semiochemicals for honeybees with multiple functions, including the reduction of water loss and facilitation of intraspecific communication, such as recognition of nestmates. CHC patterns can be modified by genotype, physiological state, pathogens, and environmental context. Therefore, the present study aimed to characterize the CHC profile of *Apis mellifera* worker bees exposed to two stressors frequently found within the colony: *Nosema ceranae* - a prevalent fungal parasite-, and amitraz-an acaricide widely used for treating *Varroa* disease-. A semi-field assay was conducted using eight healthy hives, half of which were treated with amitraz strips (a drug commonly used to control mite disease). Three day-old-bees were individually marked on the thorax and introduced into the hives. Half of these introduced bees were infected with an inoculum of ca. 100000 *N. ceranae* spores. Consequently, four treatment groups were established: a) Control, b) Exposed to amitraz, c) Infected with *N. ceranae* spores, d) Infected with *N. ceranae* and exposed to amitraz. Afterwards, bees were sampled at two monitoring points (10 and 18-days post-emergence), and both parasitic load and CHC were quantified. When analyzing the evolution of the total CHC, it revealed a general reduction in the total mass for all treatments, except for the worker bees exposed to amitraz, whose values remained similar over time. However, focusing on the analysis of the 14 identified major CHC peaks, it was possible to recognize five hydrocarbons (nonacosane, ?-hentriacontene,?-hentriacontene, hentricontane, and tritriacontadiene) that exhibited a significant reduction in bees exposed to each one of the stress factors or their combination. Our results evidence a potential impact of chemical and biological stressors on in-hive communication cues. Whether these changes in chemical signaling are sufficient to be associated with alterations of social interactions is discussed.