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ASTMH is an international society committed to equity and global impact through the treatment

# ABSTRACT BOOK

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monotherapies gained market share following the subsidy reduction. The public health impact depends on the uncertain quality of ACTs that are not WHO-quality-assured.

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### SPIDER ENVENOMATIONS THERAPEUTICS AND ANTIVENOM ACCESSIBILITY: A SYSTEMATIC REVIEW

**Christian Lecce**, Avinash N. Mukkala, Aisha Khatib, Michael A. Klowak, Pryanka Challa, Eric Shao, Jason Kwan, Tianna Chong-Kit, Jamie Sookhoo, Emma Hagopian, Dylan Kain, Mofe Adeosun, Andrea K. Boggild

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Spiders are a group of arthropods in the order *Araneae* and class *Arachnida* which have eight legs and fangs. Modern advancements in transportation allow increased human travel to areas which are endemic to spiders, increasing the possibility of envenomation. Physicians could select the optimal envenomation treatment using a clinical resource that compares efficacy statistics of antivenom versus other therapeutics. Our goal is to compile existing prevention and treatment data in the literature in order to synthesize this clinical resource. PubMed (NCBI), MEDLINE (OVID), EMBASE (OVID), Cochrane Database of Systematic Reviews (CIDR) and TOXLINE (TOXNET) were searched from inception to June 2018 using combinations of the search terms "spider," and "envenomation\*." Iterative inclusion and exclusion of search terms was employed to maximize extraction. The GRADE approach will be used to assess quality of studies reporting therapeutic interventions. Evidence will be summarized using descriptive measures for each intervention type, as well as a qualitative synthesis. Meta-analysis will be planned if sufficient efficacy measures exist. 961 MEDLINE articles, 1053 PubMed, 1486 EMBASE, 0 CIDR and 149 TOXLINE records were retrieved for title and abstract screening; after a multi-step de-duplication pipeline, 1928 remained. Following abstract screening, 282 full-text records were eligible for inclusion. Upon initial review of these records, *Latrodectus hasseltii*, *Latrodectus mactans*, *Loxosceles reclusa*, and *Phoneutria spp.* were the most medically relevant. Data will be grouped and summarized by prevention, therapeutic strategies, geographic location and species. The recommended mode of treatment and management will be provided on an evidence-based, per-species basis. Increased transcontinental movement of people and tropical produce has facilitated importation of arachnids to non-endemic regions where clinicians lack familiarity with envenomation syndromes and appropriate therapeutics. Synthesizing the current evidence around therapeutic strategies can inform the development of treatment and prevention protocols.

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### A SYSTEMATIC REVIEW OF SCORPION ENVENOMATION THERAPEUTICS AND ANTIVENOM ACCESSIBILITY

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Scorpions (Scorpiones) are eight-legged arthropods of the class *Arachnida*. With increased human migration and transcontinental shipment of produce from the tropics, the incidence of scorpion envenomations may increase in non-endemic areas. We aim to synthesize existing evidence around prevention and treatment of scorpion envenomations into a clinical resource, including provision of information on access to, and indications for, antivenom usage. PubMed (NCBI), MEDLINE (OVID), EMBASE (OVID), Cochrane Database of Systematic Reviews (CIDR) and TOXLINE (TOXNET) were searched from inception to June 2018 using combinations of the search terms "scorpion" and "envenomation". Iterative inclusion and exclusion of search terms was employed to maximize article extraction.

The GRADE approach will be used to assess quality of studies reporting therapeutic interventions. Evidence will be summarized using descriptive measures for each intervention type, as well as a qualitative synthesis. Meta-analysis will be planned if sufficient efficacy measures exist. 961 MEDLINE articles, 1053 PubMed, 1486 EMBASE, 0 CIDR and 149 TOXLINE records were retrieved for title and abstract screening; after a multi-step deduplication pipeline, 1928 remained. After title and abstract screening, 422 studies were eligible for inclusion. Some of the main medically important species include: *Mesobuthus tamulus*, *Androctonus australis*, *Hemiscorpius lepturus*, *Tityus serrulatus*, and *Centruroides sculpturatus*. Data will be grouped and summarized for ease of clinician use by prevention, therapeutic strategies, geographic location and species. The recommended mode of treatment and management will be provided on an evidence-based, per-species basis. Increased transcontinental movement of people and tropical produce has facilitated importation of scorpions to non-endemic regions where clinicians lack familiarity with envenomation syndromes and appropriate therapeutics. Synthesizing the current evidence around therapeutic strategies for scorpion envenomations can inform the development of appropriate treatment and prevention protocols.

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### GEOGRAPHIC DISTRIBUTION UPDATE OF ARGENTINIAN TRIATOMINE SPECIES AS VECTORS OF CHAGAS DISEASE FRAMED IN A CITIZEN SCIENCE PROJECT

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The Wallacean Shortfall phenomenon indicates that there is very little knowledge of the geographic distribution for the vast majority of the species described today, especially for invertebrates. In the case of insect vector species and associated vector-borne pathogens, there are current initiatives that compile occurrence data, providing geographic information that enables policymakers to make evidence-based decisions. Other vector species are often sparsely recorded and there are few globally comprehensive sets of primary data compiled. Such is the case of triatomine species (Reduviidae: Triatominae), vector of *Trypanosoma cruzi* - Chagas disease etiological agent. Currently, there are about 150 species described worldwide for the Triatominae subfamily, 137 species distributed in the Americas, and 17 species cited for Argentina. Although all species are considered as potential vectors, around 70 species have been found naturally infected with this parasite. Beyond the «Atlas of the Triatominae» published by Carcavallo et al. (1998), no work carried out a full integration of the existing geographic information of Argentinian triatomine species, as some successful efforts completed in other Latin American countries. Recently, an updated and integrated occurrence database of 135 Argentinian triatomine species called 'DataTri' was published. Additionally, for the last 15 years, the National Vector Reference Center of Argentina (CeReVe) has been compiling occurrence data during their own fieldwork, which has remained unpublished. Finally, a citizen science project called 'GeoVin' was developed to gather occurrence data of Argentinian triatomine species through citizen participation using a mobile app. Here we report a multi-source database of distributional records for all Argentinian triatomine species. A total of 9593 occurrence data were collected between 1918-2019. We hope that this study helps and encourages colleagues and citizens to keep this information updated that can be used as basic information by public health agencies to guide surveillance actions and control of Chagas disease.