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Research Article

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[Metabolic profiling and antibacterial activity of \*Eryngium pristis\* Cham. & Schltld. - prospecting for its use in the treatment of bacterial infections](#)

Morbidity and mortality of the infected patients by multidrug-resistant bacteria have increased, emphasizing the urgency of fight for the discovery of new innovative antibiotics. In this sense, natural products emerge as valuable sources of bioactive compounds. Among the biodiversity, *Eryngium pristis* Cham. & Schltld. (Apiaceae Lindl.) is traditionally used to treat thrush and ulcers of throat and mouth, as diuretic and emmenagogue, but scarcely known as an antimicrobial agent. With this context in mind, the goals of this study were to investigate the metabolic profile and the antibacterial activity of ethanolic extract (EE-Ep) and hexane (HF-Ep), dichloromethane (DF-Ep), ethyl acetate (EAF-Ep) and butanol (BF-Ep) fractions from *E. pristis* leaves. Gas Chromatography-Mass Spectrometry (GC-MS) was performed to establish the metabolic profile and revealed the presence of 12 and 14 compounds in EAF-Ep and HF-Ep, respectively.  $\beta$ -selinene, spathulenol, globulol, 2-methoxy-4-vinylphenol,  $\beta$ -amyrin,  $\gamma$ -amyrin, and lupeol derivative were some of phytochemicals identified. The antibacterial activity was determined by Minimal Inhibitory Concentration (MIC) using the broth micro-dilution against eight ATCC® and five methicillin-resistant *Staphylococcus aureus* (MRSA) clinical strains. HF-Ep was the most effective (MIC  $\approx$  5,000  $\mu$ g/ $\mu$ L), being active against the largest part of tested Gram-positive and Gram-negative bacterial strains, including MRSA, with exception of *Escherichia coli* (ATCC 25922) and *Pseudomonas aeruginosa* (ATCC 9027) and (ATCC 27853). These results suggest that *E. pristis* is a natural source of bioactive compounds for the search of new antibiotics which can be an interesting therapeutic approach to recover patients mainly infected by MRSA strains.

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Letter to Editor

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[Criteria for paediatric oral liquid form](#)

Paediatric hospitals frequently have to face the lack of commercially available medicines suitable or even licensed for their use in paediatrics. Thus, only one-third of all medicines approved by the European Medicines Agency over the period of 1995 to 2005 were licensed for use in children [1].

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Research Article

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[COVID-19 immunologic and toxicological implication: Innate immune sensor and immune escape](#)

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Related COVID-19 and new Variant and treatment like vaccine it is relevant to deeply verify the immunologic implication and in a special way regarding the innate immune sensor system and the evasion of the immune system.

This can be crucial to search for new strategies to fight this severe disease under a Toxicology-antidotes point of view.

The rapid emergence of a new variant is under study by researchers because some of these show different responses to antibodies as reported in literature (vaccine efficacy?).

In this article after a review part it is submitted a collection of hypothesis of solution to contrast COVID-19.

Spread and mortality and project hypothesis.

A new toxicological approach also in a viral respiratory disease can be a novelty to adequately fight this severe condition and this focusing not only towards specific immunity but also a specific measures.

A toxicological approach in drug- vaccine like products designing makes it possible to get the clinical outcomes needed.

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