



Тіро	Periódico
Título	Biochemical and Toxinological Characterization of Venom from Macrorhynchia philippina (Cnidaria, Hydrozoa)
Autores	Banagouro KCQ, Viana J, de Lima LP, Coelho GR, Rocha T, Girardello R, Russi KL, Kitahara MV, Sciani JM
Autor (es) USF	Banagouro KCQ, Viana J, de Lima LP, Girardello R, Russi KL, e Sciani JM.
Autores Internacionais	Kitahara MV
Programa/Curso (s)	Programa de Pós-Graduação Stricto Sensu em Ciências da Saúde
DOI	10.1155/2022/8170252
Assunto (palavras chaves)	Macrorhynchia philippina, venom, biochemistry
Idioma	inglês
Fonte	Título do periódico: Biomed Res Int ISSN: 2314-6141 Volume/Número/Paginação/Ano: 2022/8170252
Data da publicação	2022 May 17
Formato da produção	digital
Resumo	Macrorhynchia philippina is a colonial benthic hydroid from the Class Hydrozoa (Phylum Cnidaria) distributed in the tropical and subtropical marine waters from Atlantic Ocean, Indo-Pacific, and Mozambique. Its colonies somewhat resemble plants, causing confusion in the bathers who accidentally touch the animal. Acute burning/local pain, edema, erythema, and pruritus were symptoms already described, but its venom composition is unknown, as well as the participation of toxins for the symptom's development. Thus, herein, we show the biochemical composition and toxic effects of M. philippina venom. Colonies were collected and processed for histological analysis; alternatively, they were immersed into methanol containing 0.1% acetic acid for venom attainment, which was analyzed by mass spectrometry and submitted to edema and nociception evaluation in mice, hemolysis and antimicrobial assays in vitro. Before the molecule's extraction, it was possible to see the inoculation structures (hydrocladiums and hydrotheca) containing venom, which was released after the immersion of the animal in the solvents. The venom was composed mainly by low molecular mass compounds, able to cause significant reduction of the paw withdrawal latency from the hot plate test, 30 minutes after the injection, indicating the activity of at least two inflammatory mediators. The venom caused no hemolytic activity but reduced the growth of A. baumannii and K. pneumoniae strains. This study is the first biochemical description of





	M. philippina venom, with molecules that cause fast inflammatory and painful effects, characteristic of the envenomation.
Fomento	FAPESP 2019/19929-6

