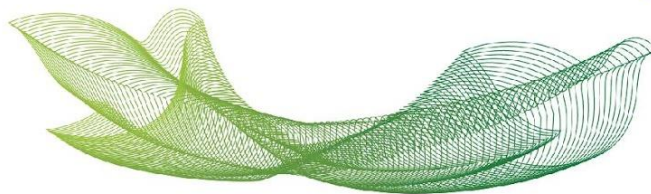


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Título	Neurotoxicity of <i>Olindias sambaquiensis</i> and <i>Chiropsalmus quadumanus</i> extracts in sympathetic nervous system
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Resumo	Cnidarians are equipped with nematocysts, which are specialized organelles used to inoculate venom during prey capturing and defense. Their venoms are rich in toxins and a potential source of bioactive compounds, however, poorly explored so far. In this work, the activity of the methanolic extracts from the hydromedusa <i>Olindias sambaquiensis</i> and the cubozoan jellyfish <i>Chiropsalmus quadumanus</i> were studied in sympathetic neurotransmission. For that, bisected rat vas deferens - a classic model of sympathetic neurotransmission - were incubated with the extracts for further myographic and histopathological analysis. The <i>O. sambaquiensis</i> extract, at 0.1 µg/mL, facilitated the neurogenic contractions of the noradrenergic-rich epididymal portion, while reducing the noradrenaline (NA) potency, which suggests an interaction with postsynaptic α1-adrenoceptors. On the other hand, a higher concentration (1 µg/mL) leads to time- and frequency-dependent blockade of nerve-evoked contractions without significantly changing the response to exogenous NA. In turn, the <i>C. quadumanus</i> extract at 0.1 µg/mL induced blockade of nerve-evoked noradrenergic contractions while reducing the potency to exogenous NA. Both extracts did not affect the purinergic neurotransmission or induce muscle damages. Our results demonstrate that <i>O. sambaquiensis</i> and <i>C. quadumanus</i> extracts significantly interfere with the noradrenergic neurotransmission without altering purinergic response or smooth muscle structure on rat vas deferens.



	Such results bring to light the pharmacological potential of <i>O. sambaquiensis</i> and <i>C. quadumanus</i> molecules for therapeutics focusing on noradrenergic neurotransmission.
Fomento	(CAPES) Coordenação de Aperfeiçoamento de Pessoal de Nível Superior; (FAPESP) Fundação de Amparo à Pesquisa do Estado de São Paulo ; (CNPq) Conselho Nacional de Desenvolvimento Científico e Tecnológico