



Ciguatoxin-induced catecholamine secretion in bovine chromaffin cells: mechanism of action and reversible inhibition by brevenal

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Résumé en anglais	Ciguatoxin (P-CTX-1B) from the dinoflagellate <i>Gambierdiscus toxicus</i> , belongs to the family of polyether neurotoxins responsible for the neurological poisoning disorder ciguatera. Although it is the most widespread marine-borne disease affecting humans, there is no current FDA-approved treatment available except for symptomatic therapies. In this paper, we report that P-CTX-1B promotes catecholamine secretion from bovine chromaffin cells, an effect that is insensitive to concomitant activation of capacitative Ca(2+) entry. Moreover, we confirm that brevenal, a polyether from the dinoflagellate <i>Karenia brevis</i> , blocks P-CTX-1B-induced catecholamine secretion. This effect is partially reversible. Our results therefore raise the prospect of finding functional antagonists for P-CTX-1B that could be useful for the treatment of ciguatera.
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