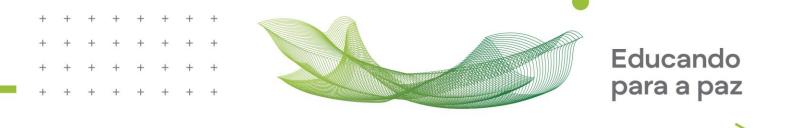


Тіро	Periódico
Título	Understanding toxicological implications of accidents with caterpillars <i>Megalopyge lanata</i> and <i>Podalia orsilochus</i> (Lepidoptera: Megalopygidae)
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Resumo	Megalopygids <i>Megalopyge lanata</i> and <i>Podalia orsilochus</i> are common causative agents of accidents in agricultural workers. These accidents are provoked by dermal contact at their larval stage and are characterized by cutaneous reactions, such as burning pain, edema and erythema, typically mild and self-limited. There is very little information about their venoms and their toxicological implications on human health. Thus, we employed proteomic techniques and biological assays to characterize venoms (bristle extracts) from caterpillars of both species collected from Misiones, Argentina. The electrophoretic profiles of both venoms were substantially different, and they presented proteins related to toxicity, such as serinepeptidases, serpins and lectins. <i>P. orsilochus</i> venom exhibited higher caseinolytic activity than <i>M. lanata</i> venom, agreeing with the fact that only <i>P. orsilochus</i> venom hydrolyzed human fibrin(ogen). In addition, the latter shortened the clotting time triggered by calcium. While the venom of <i>M. lanata</i> induced a mild inflammatory lesion in mouse skin, <i>P. orsilochus</i> venom caused prominent necrosis, inflammatory infiltration and hemorrhage at the site of venom injection. On the other hand, <i>P. orsilochus</i> venom was better recognized by <i>Lonomia obliqua</i> antivenom, although many of its proteins could not be cross-reacted, what may explain the difference in the clinical manifestations between accidents by <i>Podalia</i> and those by <i>Lonomia</i> . Altogether, this study provides relevant information about the



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	pathophysiological mechanisms whereby both caterpillars can induce toxicity on human
	beings, and paves the way for novel discovery of naturally occurring bioactive compounds.
Fomento	

