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Resumo	<p>This study explores the potential of propolis, a resinous substance produced by bees, from <i>Melipona rufiventris</i> species. With its composition encompassing resin, wax, pollen, and soil, propolis holds historical significance in traditional medicine within tropical regions. This research is driven by the scarcity of information surrounding <i>M. rufiventris</i> propolis, prompting an investigation into its chemical constituents, <i>in vivo</i> toxicity, and antimicrobial, antioxidant, and anti-inflammatory properties. This exploration could potentially uncover novel applications for this natural product, bolstering both meliponiculture practices and the preservation of native bee populations. The propolis was sampled in Cabo Verde-MG and underwent ethanolic extraction to yield an extract (EEP) for analysis. Chemical assessments (Folin-Ciocalteu, and UHPLC-HRMS) revealed the presence of polyphenols, including flavonoids. The EEP demonstrated higher antimicrobial activity against Gram-positive bacteria and exhibited efficacy against multiresistant strains isolated from complex wounds. Synergistic interactions with commercial antibiotics were also observed. Furthermore, anti-inflammatory evaluations showcased the EEP's potential in reducing NF-κB activation and TNF-α release at non-toxic concentrations. Despite these promising biological activities, the EEP exhibited no antiproliferative effects and demonstrated safety in both the MTS assay and the <i>G. mellonella</i> model. Collectively, these findings highlight the <i>M. rufiventris</i> propolis extract as a valuable reservoir of bioactive compounds with multifaceted potential.</p>
Fomento	CAPES e CNPq