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Título	Malvidin Protects against and Repairs Peptic Ulcers in Mice by Alleviating Oxidative Stress and Inflammation
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Resumo	Peptic ulcer episodes cause damage to the stomach and intestine, with inflammatory cell infiltration and oxidative stress as the main players. In this study, we investigated the potential of anthocyanidin malvidin for preventive and curative peptic ulcer treatment. The anthocyanidin effects were examined in gastric ulcer mouse models induced by ethanol, non-steroidal anti-inflammatory drugs (NSAIDs), ischemia-reperfusion (IR), acetic acid and duodenal ulcer induced by polypharmacy. Expression levels of oxidative and inflammatory genes were measured to investigate the mechanism of anthocyanin activity. At a dose of 5 mg·kg−1 , Malvidin prevented gastric ulcer induction by ethanol, NSAID and repaired the tissue after 6 days of IR. Moreover, the anthocyanidin accelerated the healing of acetic acid-induced ulcer, increased the gene expression of EGF and COX-1, and downregulated MMP-9. Anthocyanin treatment mitigated the effect of polypharmacy on inflammation and oxidative stress observed in the intestine. Additionally, the compound downregulated cytokine expression and TLR4 and upregulated HMOX-1 and IL-10, exhibiting protective activity in the mouse gut. Malvidin thus prevented gastric and duodenal ulcers due to prominent anti-inflammatory and antioxidative effects on the gastrointestinal tract that were related to gene expression modulation and an increase in endogenous defense mechanisms.
Fomento	Fapesp