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Efficacy tests and histological evaluation of a herbal product (VGH) in a rat model

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The most common causes of peptic ulcers disease and its complications are *Helicobacter pylori* infection and the use of nonsteroidal anti-inflammatory drugs (NSAIDs). In Mexico there are more than 300 records of medications that contain the active substance called paracetamol and 68% of the Mexican population that self-medicates, does so with NSAID's. As 80% of the population admits having presented symptoms such as inflammation and abdominal distension, gastric acidity, bad breath and in some cases reflux at some point of their lives. We propose the use of VGH, an herbal product whose obtaining is fast, easy and economical. The purpose of this study was to perform the characterization of the VGH product, efficacy tests in mice and histological evaluations in liver, heart, lung, kidney and spleen. The characterization of VGH was carried on through some physiochemical test such as FTIR, optical absorption, HPLC screening and a phytochemical screening. The FTIR analysis showed the presence of specific functional groups: (1) 1000 - 1200 cm^{-1} (C-O-C); (2) 1600- 1730 cm^{-1} (C=O); (3) 2850 – 2930 cm^{-1} (–CH₃, –CH₂–, =CH–); (4) 338-3920 cm^{-1} (OH). The phytochemical screening revealed the presence of the following groups of molecules: catechins, sesquiterpenlactones, naphthaquinones and

anthraquinones. VGH increases significantly the platelet levels in blood, improving the coagulation process. When administering VGH, the gastric mucosa morphology, esophagus, mucous membrane of stomach and intestinal villi showed normal morphology characteristics after VGH treatment. The administration of the erosive agent caused the destruction of the gastric mucosa allowing the release of red blood cells to the lumen of the organs studied, promoting the migration of leukocytes to the área. The use of GAHV as a repair agent against previous damage was evident and we can said that fulfilled the expectations since, despite having been administered the erosive agent for 14 days at a dose of 0.2 mg / mL / rat / day, the histological analysis showed the preservation of the normal morphology of the tissue.

Biography

Verónica Edith Gallegos-Hernández is a biotechnological engineer from the Instituto Politécnico Nacional who has worked in the remediation of soils contaminated with fossil fuels to improve the wellbeing of her conational. For her master's degree, her research is focused on the field of gastric diseases, specifically in the erosions of the digestive tract caused by environmental factors.

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