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Patent Search

Invention Title	CHARACTERIZING THE MEDICINAL PROPERTIES OF DYNAMIC DUO OF ORMOCARPUM COCHINCHINENSE AND CASSIA OCCIDENTALIS
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Abstract:

Bones are critical for support, protection, and movement, consisting of protein, collagen, and minerals like calcium phosphate. Osteoblasts build new bone, osteoclasts break down old bone, and osteocytes direct this process. Bone healing involves inflammation, repair, and remodeling. Both allopathic and natural remedies, such as Ormocarpum Cochinchinense and Cassia Occidentalis, with their bioactive compounds like flavonoids and tannins, can aid in bone regeneration and healing. This research examines the biology of these plants and their effectiveness in treating bone injuries. The FTIR spectra of ethanolic extracts from Ormocarpum Cochinchinense and Cassia Occidentalis show various peaks indicative of phytochemicals. For Ormocarpum Cochinchinense, peaks between 2983.88 and 3224.98 cm⁻¹ correspond to C-H and OH stretching, while bands between 2086.98 and 2407.18 cm⁻¹ indicate nitriles and amides. For Cassia Occidentalis, peaks at 3213.41 cm⁻¹ indicate O-H groups, and bands between 2017.54 and 2171.54 cm⁻¹ show nitriles and amides. Both extracts contain flavonoids, tannins, phenolic compounds, alkaloids, and terpenoids, which are crucial for bone regeneration and healing. The UV-Vis spectra of Ormocarpum Cochinchinense show peaks at 668 nm (chlorophyll, alkaloids, anthocyanins), 275 nm (phenolic compounds), and 211 nm (tannins, dienes). For Cassia Occidentalis, peaks at 449 nm (alkaloids) and 271 nm (phenolic compounds) are observed. In the combined extract (50%-50%), peaks at 665 nm (alkaloids, anthocyanins), 322 nm (anthocyanins), 276 nm (phenolic compounds), and 217 nm (tannins, aromatic compounds) indicate a rich phytochemical profile, essential for bone healing. The in-vitro cytotoxicity results for the test sample against hFOB1.19 cells showed low toxicity, with only 11.36% cell damage at 200 µg/mL. The sample caused significant cell disintegration after 48 hours. The IC50 value was 813.82 µg/mL, indicating minimal toxicity.

Complete Specification

Description:FORM 2

THE PATENTS ACT, 1970
(39 of 1970)

&

THE PATENTS RULES, 2003

COMPLETE SPECIFICATION
(See section 10 and rule 13)

1. TITLE OF THE INVENTION:

CHARACTERIZING THE MEDICINAL PROPERTIES OF DYNAMIC DUO OF ORMOCARPUM COCHINCHINENSE AND CASSIA OCCIDENTALIS

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