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## (54) Title of the invention : ORAL SUSPENSION COMPOSITION DERIVED FROM CURCUMA LONGA AND RELATED METHODS

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## (57) Abstract:

The oral suspension composition is designed for patients who have difficulty swallowing pills. It includes curcumin derived from Curcuma longa, providing broad-spectrum antimicrobial properties, and chitosan, a mucoadhesive polymer that enhances retention, stability, and bioavailability. The composition also contains hydroxypropyl methylcellulose, sweeteners like honey or stevia, sodium benzoate, citric acid, and purified water. This formulation ensures the curcumin particles are evenly dispersed and encapsulated by chitosan, maintaining stability and preventing degradation. The composition is suitable for children and can include additional excipients such as flavoring agents and preservatives. It exhibits antimicrobial activity against pathogens like Staphylococcus aureus and Escherichia coli, as determined by in vitro studies. Preclinical safety studies in mice and stability studies under various conditions are conducted to assess the safety profile and shelf life of the composition. Reference Fig 1

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