

## CITATION

The research work completed by Mr. Shadaan Ahmad was titled '**DESIGN & FABRICATION OF 3-D PRINTED MICRONEEDLE DECORATED PATCHES**'.

It was decided to develop a site-specific formulation of a combination of vitamin D with an efficacious anti-resorptive drug, alendronate sodium with the following **objectives**:

1. To develop a site-specific formulation of vitamin D with an antiresorptive drug Alendronate sodium
2. To optimize a formulation and process for printing micro needle-based site-specific delivery system of Vit D and Alendronate Sodium by three D printing
3. To Evaluate printed micro needle-based site-specific delivery system by in vitro methods

Help in developing a system to increase the bioavailability of vitamin D and increase its absorption by treating vitamin D deficiency.

The pre-formulation studies were completed followed by the formulation development along with the optimization and characterization were completed, followed by the the preparation of microneedle patch and concluding the sustained release of the dosage form

**Thank You**



Dr. Mohd. Aqil 27.8.2024

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