





#### Pharmavriddhi@4

A TWO DAY INTERNATIONAL CONFERENCE
Hybrid Mode

## " Pharmacy 4.0: Integrating AI, ML & IoT for Multidisciplinary Future "

苗: 06<sup>th</sup> - 07<sup>th</sup> December, 2024

### **Guidelines for Abstract Submission**

#### **FORMAT OF ABSTRACT** (template provided for reference) –

- ✓ Title: 12 font size, times new roman, normal, bold
- ✓ Authors With The Name Of Institution: 12 Font Size, Times New Roman, Normal, Bold, Separated With Commas
- ✓ Affiliations: Department, Name Of The College, Complete Address
- ✓ Abstract: Not More Than 250 Words
- ✓ Keywords: Not More Than 6 Keywords, Italic Bold
- ✓ Single spacing, A4 Margin

#### SUBMISSION OF ABSTRACT

- ✓ Abstracts have to be submitted by email: spcppharmavriddhi4@gmail.com
- ✓ Shortlisted abstracts for the competition will be intimated through email.
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**TITLE:** (Times New Roman, 14 font size, upper case, Bold)

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**ABSTRACT:** (Not more than 250 words)

**KEY WORDS:** not more than 6 (Italic & Bold)

#### SAMPLE TEMPLATE

# FORMULATION DESIGN, OPTIMIZATION AND IN-VIVO CHARACTERIZATION OF NATURAL RETARDANT POLYMERS BASED SUSTAINED RELEASE NATEGLINIDE MATRIX TABLET FOR DIABETES BY 2<sup>3</sup> FACTORIAL DESIGN

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The scope of the work is to develop and characterize the behavior of natural retardant polymers, such as hibiscus leaves extract, tamarind seed powder, and zein powder as matrix-forming agents for the development of sustained-release tablets containing Nateglinide for the treatment of diabetes mellitus. The optimized formulations were selected among three natural retardants based on pre-compression and post-compression evaluations and subjected to in-vivo studies. The swelling and erosion of Nateglinide tablets were well influenced by natural retardants and showed slower and extended drug release with more intense erosion in the medium. Nateglinide was released slowly from matrix tablets, both in acidic (pH 1.2 HCl) and basic medium (pH 7.4 phosphate buffer). And followed the super case II transport mechanism (kinetics- controlled delivery) in the first 2 hrs, the Nateglinide dose was released in sustained between 5 and 22hrs of dissolution. The matrix tablets were prepared with an average weight of  $300 \pm 0.26$  mg and hardness up to  $5.79 \pm 1.16$  kg.cm2, in-vitro release profile was slow and continuous, lasted 24 hours, and showed more extended-release compared to commercially available Nateglinide tablets Starlix and Natelide. The results suggested using natural retardants for the treatment of Diabetes mellitus over long periods.

Keywords: Polymers, Sustained Release, Nateglinide, Matrix Tablet, Factorial Design