(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :31/12/2024

(21) Application No.202411104787 A

(43) Publication Date : 10/01/2025

(54) Title of the invention : CHRONOMODULATED DRUG DELIVERY SYSTEMS FOR ANTI-DIABETIC MEDICATIONS AND RELATED METHODS

(51) International classification :A61K0047100000, A61K0009200000, A61K0031137000, A61P0003100000, A61P0025000000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
A chrono modulated drug delivery system for anti-diabetic drugs is designed to synchronize medication release with the body's natural biological rhythms. This system reduces the need for multiple daily doses, thereby improving patient compliance by decreasing dosing frequency. The formulation of anti-diabetic drugs, including Vildagliptin microspheres, is optimized to enhance bioavailability, maintain consistent blood drug levels, and improve therapeutic outcomes while reducing side effects. The controlled-release profile is achieved through specialized polymers or coatings, releasing medication at specific times aligned with biological rhythms. Additionally, a method for optimizing Vildagliptin delivery leverages past studies and advanced technologies to enhance therapeutic efficacy, minimize adverse effects, and simplify dosing regimens, making it easier for patients to adhere to their medication schedules. Reference 3

No. of Pages : 19 No. of Claims : 10