

"Noninvasive Strategy to Improve Bioavailability of Certain CNS Drugs"

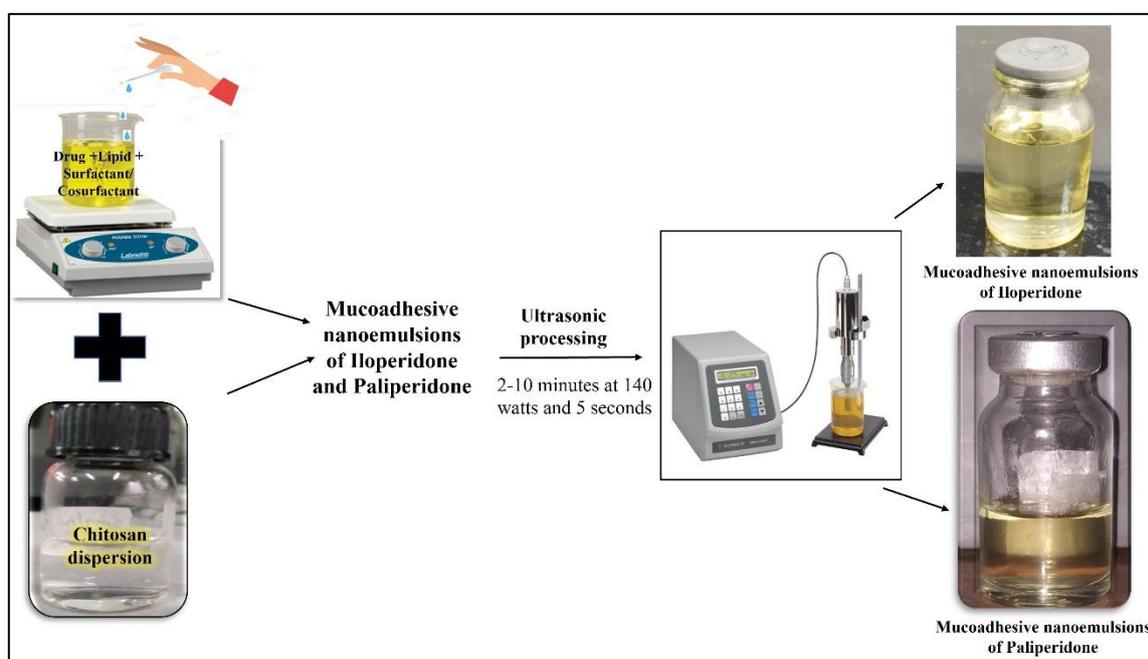
Abstract

Oral delivery of Iloperidone and Paliperidone is characterized by poor bioavailability due to extensive first pass metabolism. To overcome these challenges, we have developed mucoadhesive nanoformulations of Iloperidone and Paliperidone respectively that can be delivered through nasal route and reach the brain more effectively. In preclinical studies, this approach has shown improved drug bioavailability and effective brain delivery. Also, the cardiovascular, renal and metabolic side effects of systemic antipsychotics that are partially mediated by blocking of peripheral dopaminergic receptors can be reduced by nose to brain delivery thereby improving therapeutic outcomes in schizophrenia. Nasal route of delivery is noninvasive, easily accessible to the care-giver and does not require hospital settings. This noninvasive approach can improve therapeutic outcomes in treating schizophrenia due to brain specific delivery and reduced off-target toxicities. Additionally, a user-friendly approach is provided especially for care giver; when the patient is unconscious or uncooperative.

Salient features

- Non-invasive delivery: No injections or hospital settings required, ease of accessibility
- Improved therapeutic outcomes: rapid onset of action and prolonged drug release
- Patient and care giver friendly, promising results during preclinical studies

Methodology



Patent Application Nos.: (Mucoadhesive nanoemulsions of Iloperidone 202321084348A and Mucoadhesive nanoemulsions of Paliperidone 202421013903A)

Estimated cost of developed products

Mucoadhesive nasal nanoemulsions of Iloperidone Rs 350/- (for 10mL)

Mucoadhesive nasal nanoemulsions of Paliperidone Rs 380/- (for 10mL)

(Higher production capacity may reduce the cost)

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