20th INTERNATIONAL E-SYMPOSIUM ON
ADVANCES IN TECHNOLOGY
& BUSINESS POTENTIAL OF
NEW DRUG DELIVERY SYSTEMS

Dates: 24th – 26th February 2022

Azadi Ka Amrit Mahotsav

ABSTRACT BOOK

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Chitosan Based Polyelectrolyte Complexes for Nasal Drug Delivery

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Keywords: Polyelectrolyte complexes, Perospirone, Nanoparticle, Nasal drug delivery, Chitosan

Aim and Objectives: Formulation and evaluation of chitosan based polyelectrolyte complex for nasal drug delivery to improve the residence time, absorption of drug through nasal mucosa and to bypass hepatic first pass metabolism of drug.

Methodology: Chitosan based polyelectrolyte complex were fabricated by using ionic gelation technique. Aqueous solution of chitosan (0.4 g chitosan in 40 ml of 2% acetic acid) prepared at ambient temperature under magnetic stirring, 40 mg of Perospirone was dispersed into chitosan solution before addition of pectin solution.

Results and Discussion: From the results of evaluation studies it was concluded that the most stable polyelectrolytes complexes are obtained in alkaline conditions (at pH 10 & 12) (Fig no.1&2). At alkaline pH conditions, the polymer chain was sufficiently close to form more stable polyelectrolyte complexes.

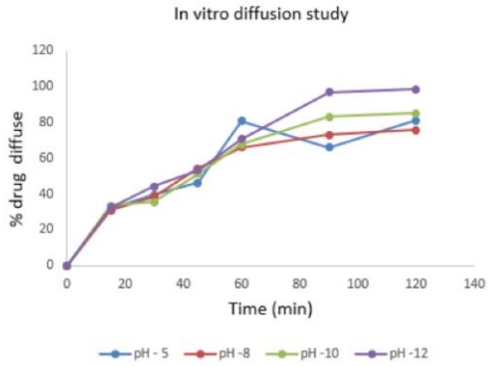

Fig. 1

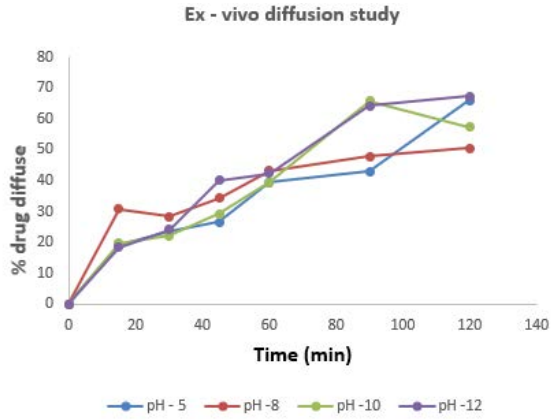

Fig. 2

Conclusion: Hence it can be concluded that chitosan based polyelectrolyte complexes can be used for the nasal drug delivery.

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Acknowledgements: First and foremost, I would like to thank my research guide Dr. Purushottam Gangane sir and our principal Dr. Ujjwala Mahajan ma'am for giving me this opportunity. Authors acknowledge the timely help of Dadasaheb Balpande college of pharmacy for their help in completion of project and thesis work.I would also like to thank Controlled Release Society for giving me this opportunity.