



Intranasal delivery systems as new treatment paradigm for the treatment of postmenopausal osteoporosis

Dr. Foziyah Zakir

Department of Pharmaceutics, School of Pharmaceutical Education and Research, Jamia Hamdard, New Delhi, India

Abstract:

Osteoporosis is the most prevailing disease in postmenopausal women leading to increased risk of fractures, pain and low quality of life. It is a progressive bone disease which remains unnoticed until a fracture occurs. The disease is more predominant in older age population particularly females due to reduced estrogen levels and limited calcium absorption. The cost burden of treating osteoporotic fractures is too expensive therefore primary focus should be treatment at an early stage. Most of the marketed drugs are available as oral delivery dosage forms. The complications as well as patient non-compliance limit the use of oral therapy for prolonged drug delivery. Intranasal delivery system seems to be a promising approach for systemic delivery of drugs through nasal cavity bypassing the first-pass effect. Intranasal delivery has the potential to improve the absorption of the drug, enhance the bioavailability, provide better patient compliance and possibility of self administration. Most of the osteoporotic medications are not absorbed orally due to proteomic nature or first pass metabolism. Therefore, a suitable delivery system can be designed to promote intranasal delivery of therapeutics. We have developed an intranasal in-situ thermosensitive nanoemulgel of raloxifene hydrochloride to overcome the pharmaco-technical limitations of the drug. The delivery system boosted the bioavailability of raloxifene hydrochloride by 7 fold and improved the bone mineral density by 162% when compared with marketed oral tablets.

Biography:

Dr. Foziyah Zakir is PhD from Jamia Hamdard (NIRF rank 1), New Delhi, India and completed her M. Pharm in pharmaceutics from IK Gujral Technical University, Punjab, India in 2009. She is a pharmaceutical nanotechnology professional with > 9 yrs of research experience and > 6 yrs teaching experience. She is currently working as a women scientist on a govt funded project (DST)



for the treatment of postmenopausal osteoporosis. Dr. Foziyah has more than 20 referred articles in high impact journals >4 (h-index=9, >300 citations). She has more than 50 conference proceedings and abstracts. Dr. Foziyah has received funding of > 20,00,00 INR from DST.

Publication of speakers:

1. Anjum, Farzana & Zakir, Foziyah & Verma, Devina & Aqil, Mohd & Singh, Manvi & Jain, Pooja & Mirza, Mohd & Anwer, Md. Khalid & Iqbal, Zeenat. (2020). Exploration of nanoethosomal transgel of naproxen sodium for the treatment of Arthritis. *Current Drug Delivery*. 17. 10.2174/1567201817666200724170203.
2. Safhi, Mohammed & Sivagurunathan Moni, Sivakumar & Jabeen, Aamena & Zakir, Foziyah & Islam, Farah & Anwer, Tarique & Bagul, Uddhav & Elmobark, Mohamed & Khan, Gyas & Siddiqui, Rahimullah & Abouelhag, Hussien & Alam, Dr. Mohammad. (2017). Nanoparticle System for Anticancer Drug Delivery: Targeting to Overcome Multidrug Resistance. 10.1016/B978-0-323-52725-5.00008-3.
3. Zakir, Foziyah & Ahmad, Adil & Farooq, Uzma & Mirza, Mohd & Tripathi, Alok & Singh, Divya & Shakeel, Faiyaz & Ahmad, Farhan & Kohli, Kanchan. (2020). Design and development of a commercially potential in situ nanoemulgel for the treatment of postmenopausal osteoporosis. *Nanomedicine*. 15. 10.2217/nmm-2020-0079.

International conference on pharmaceutics and Drug Discovery

Citation: Dr. Foziyah Zakir : Intranasal delivery systems as new treatment paradigm for the treatment of postmenopausal osteoporosis, Euro pharma 2020 : July 15, 2020; London, UK