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Erratum

GENERATION-DEPENDENT TARGETING POTENTIAL OF DONEPEZIL-LOADED POLY (PROPYLENE IMINE) DENDRIMER THROUGH GOAT NASAL MUCOSA

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ABSTRACT

Objective: In the domain of nano drug delivery, dendrimers are the most explored bioactive polymeric carrier system. The present work was aimed to study the diffusion potential of different generations of Poly(propyleneimine) (PPI) dendrimers on goat nasal mucosa in an *ex vivo* study and synthesize a stable dendrimer for olfactory drug delivery.

Methods: The generations (3.0G, 4.0G, and 5.0G) of PPI dendrimer were synthesized and PEGylated by MPEG 5000 and then loaded with donepezil. A comparative study was carried out among all generations in terms of their drug loading capacity, stabili.ty, sustained release behavior as well as for targeting efficacy. An *ex-vivo* study was carried out on Franz Diffusion Cell with goat nasal mucosa.

Results: The developed G3, G4, and G5 dendrimer formulations had entrapment efficiency of 24.33±0.56%, 40.12±0.62%, and 60.4±0.6%, respectively. The nasal diffusion study revealed that 5.0G PPI dendrimer increased diffusion of donepezil up to 47% as compared to the pure solution of donepezil, while 10% improvement in diffusion was seen as compared to 4.0 G PPI dendrimer. Thus obtained results claimed that the drug loading as well as targeting potential of PPI dendrimers increased with the increase in the number of generations. The investigation outcome indicated promising results of 5.0G PPI dendrimer over the 3.0G and 4.0G PPI dendrimer generations for their drug loading capacity, stability, and sustained release action.

Conclusion: The 5.0G PPI dendrimer proved its superior candidature over the other lower generations of PPI dendrimers for drug delivery and drug targeting.

Keywords: Dendrimer, PPI, Generation, Nasal mucosa, Diffusion, Drug loading

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CORRECTION

Correction to: Generation Dependent Targeting Potential of Donepezil Loaded Poly (Propyleneimine) Dendrimer through Goat Nasal Mucosa

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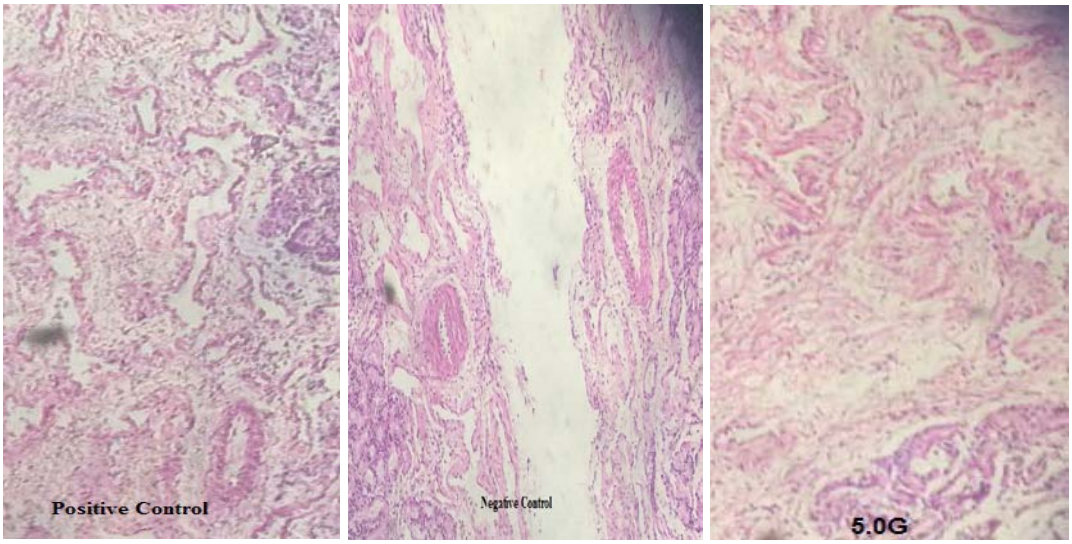
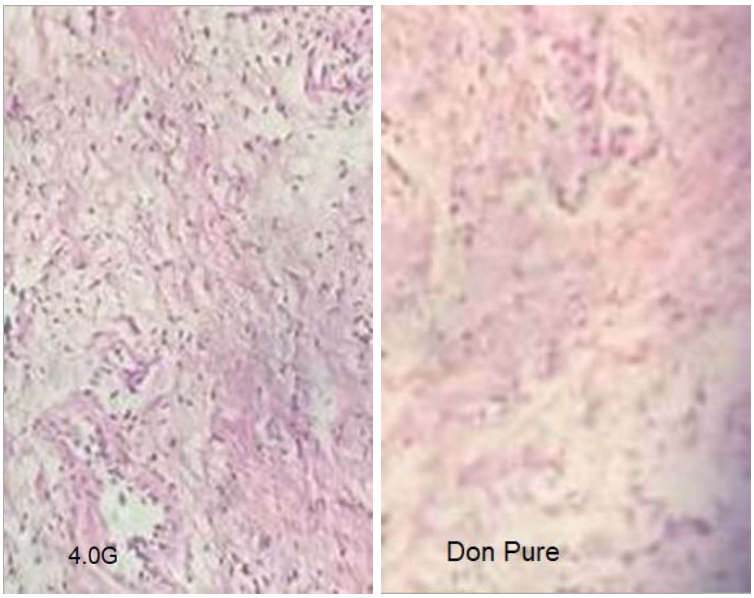
CORRECTION

"The image (D) of "G4PPID" and image (E) of "Pure donepezil treated" group in fig. 10 is incorrect in the original figure. A corrected fig. is shown below."

The original article can be found online at http://dx.doi.org/10.22159/ijpps.2018v10i12.29912



A B C



D E

Fig. 10: Photomicrograph of sections of goat nasal mucosa of (A) Positive control group, (B) Negative control (C) G5PPID (D) G4PPID and (E) Pure donepezil treated (magnification: 400X)