



## Oral Bioavailability enhancement of Ganciclovir by Chitosan Nanoparticles: Pharmacokinetics Studies

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**ABSTRACT:** Ganciclovir (GCV), an acyclovir analogue, proved to have excellent antiviral activity against human Cytomegalovirus (CMV), a leading cause of congenital infections worldwide. Ganciclovir (GCV), given intravenously (i.v.) at 5 mg/kg of body weight once daily, or orally as capsules at 1,000 mg three times a day (TID), is the standard drug regimen for both the treatment and prevention of CMV disease. However, i.v. GCV is an inconvenient drug regimen for long-term use, requiring i.v. catheters and might leads to sepsis. Although GCV capsules are more convenient, the low relative bioavailability (6%) limits the concentrations in serum. In recent years, one promising delivery system with improved oral bioavailability, chitosan nanoparticles (CNs) have attracted considerable attention<sup>1,2</sup>. Hence, in present investigation various oral formulation containing GCV along with chitosan nanoparticles containing GCV have been developed and their in vivo studies using Wistar rats have been performed.



### Biography:

Author has completed his PhD in 2012 and has published more than 25 research papers in various reputed national and international journals. He is working as Assistant Professor at Ramanbhai Patel College of Pharmacy, Changa affiliated to Charotar University of Science and Technology. He is having expertise in research and development pertaining to multiparticulate formulations and analytical method development.

### Publications:

1. Development of Fast Dissolving Tablets Containing Fexofenadine Hydrochloride Prepared by Lyophilization Technique.
2. Development of Bio-adhesive Buccal Tablet of Nicorandil Using Factorial Approach.
3. Evaluation of terbutaline sulphate encapsulated ethylcellulose microspheres: A factorial approach.
4. Effect of hydrocolloid on the physicochemical properties of theophylline-loaded agar microspheres.
5. Effect of cross-linking on physicochemical properties of chitosan mucoadhesive microspheres: A factorial approach

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