

**SHREE NARANJIBHAI LALBHAI PATEL COLLEGE OF PHARMACY, UMRAKH**  
**Webinar on**

**Date:** 26 May, 2020

**Topic:** “**Gastro retentive drug delivery system - fundamental approaches and evaluation**”

**Resource Person:** Dr. D.M Patel, Associate Professor, Dept. of Pharmacy, Gujarat Technological University

**NO. of Participants :** 644

**Summary of Session:**

Shree Naranjibhai Lalbhai Patel College of Pharmacy organized interactive live webinar on 26<sup>th</sup> May, 2020 to acquaint faculty members, B.Pharm and M.Pharm students with “**Gastro retentive drug delivery system - fundamental approaches and evaluation**”. The guest speaker was Dr. D.M Patel, Associate professor, Dept. of Pharmacy, Gujarat Technological University. The webinar started with welcome address and introduction of the speaker by Dr. Biren Shah.

Dr. D.M.Patel, during his talk, covered brief introduction of GRDDS and various formulation approaches of GRDDS including high density system(HDS), floating system (FS), swelling and expanding system (SS), Mucoadhesive and Bioadhesive system (AS) in detail.. He also discussed about the drugs benefited by GRDDS, advantages, early marketed products, limitations and the evaluation of GRDDS.

The session was attended by nearly 644 students and faculty members. There was an interactive question and answer session following the session and the session came to an end with proposal of vote of thanks by Dr. Jitendra Yadav. Feedback forms about the session were also collected from the participants.



Shree Naranjibhai Lalbhai Patel College  
of Pharmacy, Umrakh

e-EXPERT TALK

**Gastro-retentive Drug Delivery System:  
Fundamental, Approaches and Evaluation**

By



**26 May,  
2020**

**12:00 PM  
Onwards**

**Dr. D. M. Patel**

Associate Professor, Dept. of Pharmacy,  
Gujarat Technological University

SHREE NARANJIBHAI LALBHAI PATEL COLLEGE OF PHARMACY, UMRKHA



Dr. D. M. Patel



Dr. Dhiren P. Shah. Principal, SNLPCP, Umr...



Dr. Biren Shah



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> AWARDED AS BEST ECONOMICALLY DEVELOPED COLLEGE  
> ATTAINED 100% RESULT IN M PHARM

**GASTRO RETENTIVE DRUG DELIVERY SYSTEMS**

GRDDS

Dr. D. M. Patel  
Associate Professor  
GTU Graduate School of Pharmacy, Ahmedabad

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Web: www.sripcp.ac.in

Drugs benefited by GRDDS

- Drugs acting locally in the stomach  
E.g. Antacids and drugs for H. Pylori viz, Misoprostol.
- Drugs that are primarily absorbed in the stomach  
E.g. Amoxicillin
- Drugs that are poorly soluble at alkaline pH  
E.g. Furosemide, Diazepam, Verapamil, etc.
- Drugs with a narrow absorption window  
E.g. Cyclosporine, Levodopa, Methotrexate etc.

gastro-retentive Drug Delivery System: Fundamental, Approaches and Evaluation

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**In Vivo Evaluation**

**Radiology:**

- X-ray is widely used for examination of internal body systems
- Barium Sulphate is widely used Radio Opaque Marker
- So, BaSO<sub>4</sub> is incorporated inside the dosage form and X-ray images are taken at various intervals to view GRDF
- Its major advantages as compared to  $\gamma$ -Scintigraphy are simplicity and cost
- However, use of X-ray experiment in biopharmaceutical studies involving healthy volunteers
- Barium sulphate high concentration: e.g. 40%
- Aluminum thread contrast medium can also be used

Gastro-retentive Drug Delivery System: Fundamental, Approaches and Evaluation

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