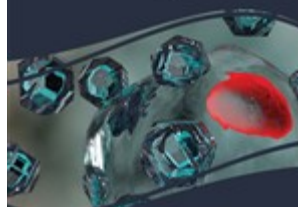


Premier Reference Source

Multifunctional Nanocarriers for Contemporary Healthcare Applications



Ed. Abel Garcia, Nanobio 1.0, Science Day,
and Tasha J. Alford

The Journal of
Nanotechnology

10% Discount on All E-Books through IGI Global's Online Bookstore Extended

(10% discount on all e-books cannot be combined with most offers. Discount is valid on purchases made directly through IGI Global Online Bookstore (www.igi-global.com) (<https://www.igi-global.com/>)) and may not be utilized by booksellers and distributors. Offer does not apply to e-Collections and exclusions of select titles may apply. Offer expires December 31, 2022.)

[Browse Titles \(https://www.igi-global.com/search/?p=&ctid=1\)](https://www.igi-global.com/search/?p=&ctid=1)



Application Potential of Polymeric Nanoconstructs for Colon-Specific Drug Delivery

Sanjay Kumar Jain (Dr. Harisingh Gour University, India), Ankita Tiwari (Dr. Harisingh Gour University, India), Ankit Jain (GLA University, India), Amit Verma (Dr. Harisingh Gour University, India), Shivani Saraf (Dr. Harisingh Gour University, India), Prithish Kumar Panda (Dr. Harisingh Gour University, India) and Gaytri Gour (Dr. Harisingh Gour University, India)

Source Title: Multifunctional Nanocarriers for Contemporary Healthcare Applications (/book/multifunctional-nanocarriers-contemporary-healthcare-applications/185485)

Copyright: © 2018

Pages: 28

DOI: 10.4018/978-1-5225-4781-5.ch002

**OnDemand PDF
Download:**

\$37.50

() Available

[Current Special Offers](#)

Abstract

Numerous applications of colon-specific drug delivery have been found in a wide array of diseases like irritable bowel syndrome (IBS), inflammatory bowel diseases (ulcerative colitis and Crohn's disease), colorectal cancer, and diverticulitis. Drug delivery to the colon has different anatomic and pathophysiological barriers. In recent advancements, these barriers were overcome by using biodegradable polymeric nanoconstructs, which are exhibiting minimal systemic adverse effects. Various polymeric nanoconstructs (PNCs) such as nanoparticles, micelles, and dendrimers have been exploited for effective targeting to pathological sites of colon. PNCs on oral administration not only protect the bioactive from physicochemical degradation but also prevent premature leakage in the upper parts of gastrointestinal tract. The chapter summarizes various PNCs-based approaches for colon-specific drug delivery.

Chapter Preview

Top

Anatomy And Physiology Of The Colon

Parts of the Colon