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Use of natural polymers instead of synthetic polymers in targeting the drug to the colon: A review

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Inflammatory Bowel Diseases (IBD) is a chronic inflammation of entire gastrointestinal tract, which include the conditions like Ulcerative Colitis (UC) and Crohn's disease which upon untreated leads to life threatening complication termed as colorectal cancer. The treatment of IBD is very versatile and upon which sulfasalazine (SFZ) is the only aminosalicylate which is still counted as the primary drug of choice. So, what is the problem? Targeting is the main problem. The suitable dosage form for the treatment of IBD is Colon Targeted Drug Deliver (CTDD). The ideal CTDD will be that when it can deliver at least 85% drug to the colon. To bypass the first two hours of stomach acidic environment (pH-1.2) and then next three hours of intestinal slight basic environment (pH-6.8) requires a suitable polymer for protecting the drug to release. The polymer has to survive in an acidic environment, in short, for first 5 hours the release should not be more than 15% and for that we need suitable polymer to coat. The Eudragit is the basic polymer which is used for coating of the SFZ. So, the idea is to target SFZ with natural polymer like Guar Gum can actually help in targeting the drug and over usage of eudragit have its own side effects anyway.

Biography

G Prudhvi Raj has completed his Bachelor's at the age of 22 years from Jawaharlal Nehru Technological University affiliated college of pharmacy and Master's in Pharmacology from Lovely Professional University, School of Applied Medical Sciences. During Masters, he has worked on developing a novel formulation for the treatment of Ulcerative colitis by using Sulfasalazine which was coated with guar gum and tested by using a suitable animal model.

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