In the United States, Inflammatory Bowel Disease (IBD) is the most common reason patients are referred to gastroenterologists. Due to the multitude of symptoms, patients are often unaware that they suffer this condition. Because of this complexity, IBD is often difficult to diagnose. Symptoms vary from patient to patient and range from:
- Cramps
- Abdominal pain
- Bloating, Diarrhea, Constipation
- Altered Gastrointestinal Motility
- Visceral hypersensitivity
- Post Infection Reactivity
- Carbohydrate Malabsorption
- Intestinal Inflammation

The drug being formulated is a plant-based metabolite and less carcinogenic than the medications listed above.

**Statistics of Patients**

**Introducion**

**Traditional Treatment Disadvantages**

**Experimental Results**

**Formulation**

The nanoprecipitation method was utilized to form a drug polymer complex.

The drug, polymer, and solvent solution was added dropwise into a vial of stabilizer and water under constant stirring.

**Future Outlook**

The future outlook for this project includes the development of a stable drug delivery system and optimizing the drug release from the polymer through the pH dissolution test, drug loading, mice studies, and drug coatings at different pH of gastrointestinal tract for a specified period of time.

**Conclusions**

Based on literature, IBD impacts quality of life and does not have a medication regimen that lacks major side effects. Thus, the proposed drug polymer complex drug delivery system aims to reduce the inflammation of intestinal tissue in both Crohn’s disease and Ulcerative Colitis. The optimization of the complex with the integration of a stabilizer, polymer, and drug has been demonstrated by nanoprecipitation methodology.