

Formulation and Treatment Method for Intestinal Maladies

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Abstract

Intestinal disorders including inflammatory bowel diseases, functional gastrointestinal conditions, and colorectal cancer represent a growing global challenge for healthcare systems. Conventional treatment approaches primarily focus on symptom management and are often associated with limited long-term efficacy, undesirable side effects, or both. This white paper presents a novel, integrative therapeutic framework based on a patented set of formulations and dosing strategies designed to support intestinal health through the synergistic action of natural compounds, essential micronutrients, and bioactive plant-derived constituents. Grounded in emerging research from nutritional science, phytotherapy, and gut microbiome studies, this approach demonstrates potential anti-inflammatory, antioxidant, prebiotic, and immunomodulatory effects. The paper translates complex patent language into a clinically accessible and scientifically grounded framework, situating the formulation within the broader body of gastrointestinal health literature. It further explores proposed mechanisms of action, summarizes preliminary clinical observations, and outlines considerations for future research and potential clinical applications.

Introduction

Intestinal maladies encompass a broad spectrum of gastrointestinal disorders, including functional conditions such as irritable bowel syndrome, inflammatory diseases, and malignancies such as colorectal cancer (Cleveland Clinic, 2021). These conditions are highly prevalent and often chronic, placing a significant burden on both quality of life and healthcare systems. In the United States alone, gastrointestinal diseases affect tens of millions of individuals annually, commonly presenting with symptoms such as abdominal pain, altered bowel habits, malabsorption, fatigue, and systemic inflammation. Growing recognition of the roles of diet, inflammation, and the gut microbiome in gastrointestinal health has driven increased interest in integrative and nutrition-focused therapeutic approaches. Plant-derived bioactive compounds, dietary fibers, antioxidants, and targeted micronutrients have demonstrated potential to modulate inflammatory pathways, strengthen intestinal barrier integrity, and promote a healthier microbial balance. Against this backdrop, the patented formulation and therapeutic protocol described herein represent a structured, multi-component strategy designed to address both clinical symptoms and underlying pathophysiological mechanisms. The purpose of this white paper is to contextualize the patented invention within the current scientific literature, outline

its formulation rationale and therapeutic approach, and evaluate its potential applicability in the management of intestinal disorders, including advanced conditions such as colorectal cancer.

Scientific Background and Rationale

Intestinal Maladies and Inflammation

A defining feature of many intestinal disorders is chronic, unresolved inflammation. Persistent inflammatory signaling can disrupt normal gastrointestinal function by damaging epithelial cells, compromising intestinal barrier integrity, and altering immune regulation within the gut. Over time, these processes may contribute to increased intestinal permeability, dysbiosis, and, in more severe cases, the initiation and progression of carcinogenic pathways. Lifestyle factors play a substantial role in the development and persistence of gastrointestinal inflammation. Diets low in fiber and rich in highly processed foods, combined with physical inactivity and elevated oxidative stress, are strongly associated with an increased risk of intestinal disease. These factors can exacerbate inflammatory signaling, impair microbial diversity, and weaken mucosal defense mechanisms. In contrast, dietary patterns rich in plant-based foods, natural fibers, and bioactive compounds have been consistently linked to reduced inflammatory burden and improved gut health. Phytochemicals, antioxidants, and prebiotic fibers support beneficial microbial populations, promote short-chain fatty acid production, and help maintain epithelial integrity. Together, these nutritional and lifestyle elements highlight the importance of integrative strategies that address inflammation at its root while supporting the structural and functional resilience of the gastrointestinal tract.

Role of Dietary Fibre and Resistant Starch

Fibrous diets, particularly those rich in prebiotic fibers and resistant starches play a critical role in maintaining intestinal health, as these substrates serve as primary energy sources for beneficial gut microorganisms (Munir et al., 2024). Through microbial fermentation, these fibers are converted into short-chain fatty acids, most notably butyrate, which is essential for the health and energy metabolism of colonocytes. Butyrate also supports immune regulation within the gut, strengthens epithelial barrier function, and exhibits well-documented anti-inflammatory and anti-carcinogenic properties. Among functional dietary fibers, resistant starch and inulin derived from green banana have attracted particular attention due to their multifaceted physiological benefits. These compounds have been shown to support improved glycemic control, favorably modulate gut microbial composition, and reduce markers of intestinal inflammation. By promoting a more balanced microbiome and enhancing metabolic and immune signaling, green banana-derived fibers represent promising nutritional tools for supporting gastrointestinal resilience and long-term intestinal health.

Micronutrients and Phytochemicals

Preclinical and clinical studies have shown that a range of plant-based compounds including curcumin, quercetin, resveratrol, pine bark extract, and green tea polyphenols exhibit potent antioxidant, anti-inflammatory, and antiproliferative properties (Cziple et al., 2022). These bioactive molecules are known to modulate key signaling pathways involved in oxidative stress, immune regulation, and cellular growth, making them particularly relevant in the context of chronic inflammation and disease progression. Essential micronutrients such as vitamins C, D3, and K2, along with zinc and magnesium, play a critical role in immune system regulation, antioxidant defense, and cellular repair processes. Adequate levels of these nutrients support barrier integrity, tissue regeneration, and balanced inflammatory responses. When combined, plant-derived bioactives and targeted micronutrients may act synergistically with conventional therapies, potentially enhancing clinical efficacy while reducing treatment-related toxicity and adverse effects.

Overview of the Patented Formulation and Treatment Method

The patented invention explains a multifaceted approach to treatment which involves the use of six proprietary formulations that are administered simultaneously throughout a set period of treatment, which is usually ninety days. The approach is supposed to be adjustive with dosing timetables changed as per patient adjustable parameters like age, body weight, and response to the therapy.

Formulation Composition

The six formulations include:

- **First formulation:** A liquid base consisting of water, zeolite extract, ascorbic acid, sea mineral extract, and potassium sorbate. It is also known that the zeolites have adsorptive and detoxifying effects and can adsorb the toxins and facilitate homeostasis in the intestines.
- **Second formulation:** Vitamin D3, L-tyrosine, caffeine anhydrous, L-theanine vitamin, Mucuna pruriens, pine bark extract, and turmeric root extract in the form of a capsule mixture. This formula is aimed at metabolic support, lowering the levels of inflammation, and a neuroendocrine system.
- **Third formulation:** Liquid sachet of turmeric curcuminoids, resveratrol, black cumin oil, apple cider vinegar, and other supportive substances and is intended to increase antioxidant ability and metabolic activity.
- **Fourth formulation:** A liquid containing high amounts of micronutrients, which consists mostly of vitamin C, zinc sulfate and vitamin D3, which helps in maintaining the immune and antioxidant defense.
- **Fifth formulation:** This is an agave inulin based complex prebiotic and phytonutrient containing green banana powder, spirulina, grasses, vegetables, fruits, probiotics, and fibres like psyllium husk. The formulation is a direct approach to the composition of gut microbiota and intestinal motility.
- **Sixth formulation:** Vitamin C in the form of a capsule, quercetin, magnesium, beta-NAD and other vitamins, targeted at the metabolism of cellular energy, control of inflammation, and antioxidants.

Treatment Protocol

The treatment protocol is designed to begin with the introduction of all six formulations on the first day, followed by a gradual and carefully monitored increase in the dosage of selected components. This phased escalation strategy is intended to enhance patient tolerability, promote physiological adaptation, and reduce the likelihood of adverse reactions, while optimizing the overall therapeutic response. By allowing the body time to adjust, the protocol supports sustained engagement with the intervention over time. The integrated nature of the protocol reflects a systems-based approach to gastrointestinal health, in which multiple interrelated physiological processes are addressed simultaneously. Detoxification pathways, immune modulation, microbiome support, and nutritional replenishment are coordinated to work in synergy rather than in isolation. This comprehensive framework is intended to restore balance within the gastrointestinal environment and support long-term functional improvement rather than short-term symptom relief alone.

Mechanisms of Action and Therapeutic Potential

The pharmacological promise of the patented approach lies in its multi-targeted mechanism of action, which aligns with current research trends in gastrointestinal therapeutics and phytotherapy (Cziple et al., 2022; Munir et al., 2024). Rather than addressing a single pathway, this strategy simultaneously targets microbial balance, inflammatory signaling, oxidative stress, and nutrient deficiencies key factors implicated in the development and progression of intestinal disorders. Prebiotic fibers such as inulin and resistant starch promote beneficial microbial fermentation and the production of short-chain fatty acids, particularly butyrate. These metabolites support intestinal barrier integrity, enhance mucosal immunity, and contribute to the reduction of local and systemic inflammation. In parallel, antioxidants and polyphenolic compounds help neutralize reactive oxygen species, thereby protecting intestinal epithelial cells from oxidative injury and preserving normal cellular function. Several anti-inflammatory phytochemicals, including curcumin and quercetin, have been shown to modulate major inflammatory pathways involved in inflammatory bowel diseases and colorectal carcinogenesis. By influencing cytokine signaling, transcription factors, and immune cell activity, these compounds may help attenuate chronic inflammatory states that underlie disease progression. Additionally, zeolite-based components contribute to the binding and reduction of intestinal toxins and irritants, potentially lowering inflammatory burden and improving gut environment stability. Targeted micronutrient support further addresses common deficiencies observed in individuals with chronic gastrointestinal conditions, supporting immune competence, enzymatic function, and tissue repair. Collectively, these complementary mechanisms suggest ben-

efits that extend beyond symptomatic relief and raise the possibility of influencing disease trajectory and resilience. Preliminary case data described in the patent documentation report notable improvements in inflammatory biomarkers, hepatic enzyme profiles, and gastrointestinal symptoms in a patient undergoing chemotherapy for colorectal cancer. While these findings do not replace evidence derived from controlled clinical trials, they are consistent with broader clinical observations in gastrointestinal disease management and underscore the need for further systematic investigation (Cleveland Clinic, 2021).

Implications for Clinical Practice and Future Research

The patented formulation and treatment protocol represent an integrative, nutrition-based strategy that aligns closely with current scientific understanding of gut health and chronic disease management. By addressing multiple biological pathways simultaneously, this comprehensive design may be particularly well suited as an adjunctive therapy alongside conventional medical treatments. Its supportive role may be especially relevant for patients experiencing gastrointestinal side effects associated with standard therapies, where maintaining intestinal integrity, microbial balance, and inflammatory control is critical for treatment tolerance and overall quality of life. Future research should prioritize well-designed controlled clinical trials to rigorously evaluate the formulation's safety, efficacy, optimal dosing parameters, and long-term outcomes across diverse patient populations. In parallel, mechanistic studies are warranted to further elucidate how the formulation exerts its effects, with particular emphasis on gut microbiome modulation, inflammatory and oxidative stress biomarkers, and metabolic responses. Such investigations would provide valuable insight into the biological pathways involved and help refine therapeutic applications. In addition, considerations related to regulatory compliance, formulation consistency, and quality standardization will be essential to facilitate broader clinical adoption. Establishing clear manufacturing standards and evidence-based guidelines will support reproducibility, clinician confidence, and integration into existing care frameworks, ultimately enabling more widespread and responsible use of this integrative approach.

Conclusion

Intestinal maladies represent complex and multifaceted conditions that require comprehensive, multi-targeted treatment strategies rather than single-pathway interventions. The patented formulation and therapeutic approach presented in this white paper offer an innovative, integrative model grounded in nutritional science and phytotherapy. By addressing interconnected factors such as chronic inflammation, oxidative stress, microbiome imbalance, and micronutrient deficiencies, this approach has the potential to support intestinal resilience and improve overall gastrointestinal function. When used alongside conventional medical therapies, this strategy may help enhance therapeutic tolerance, support symptom management, and contribute to improved patient outcomes across a range of intestinal conditions. Its ability to simultaneously target multiple physiological processes reflects a growing shift toward systems-based approaches in gastrointestinal care. Continued scientific evaluation will be essential to fully establish the clinical relevance of this intervention. Rigorous clinical trials, mechanistic studies, and long-term outcome assessments will help determine its efficacy, safety, and optimal role within evidence-based gastrointestinal treatment frameworks. Through such validation, this integrative approach may become a valuable component of modern intestinal disease management.

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