

GANODERMA LUCIDUM EXTRACT IN GASTROENTEROLOGICAL DISEASES

Qodirova Saodat Rakhimjonovna

Associate Professor, Department of Gastroenterology and
Physiotherapy,

Center for Professional Development of Medical Workers

<https://orcid.org/0009-0009-0720-7702>

Email: saodatrahimjanovna@gmail.com

ABSTRACT

This scientific article investigates the effectiveness of *Ganoderma lucidum* extract in gastroenterological diseases, particularly ulcerative disorders accompanied by intestinal dysbiosis. The study evaluated the influence of the extract on intestinal microbiocenosis, immunological status, antioxidant defense system, and psychoemotional condition of patients. The findings demonstrated that *Ganoderma lucidum* extract normalized intestinal microflora, reduced inflammatory mediators, and improved immune system activity. In addition, enhancement of antioxidant activity and improvement in patients' quality of life were observed. The obtained results confirm that *Ganoderma lucidum* extract represents a promising therapeutic agent in the комплекс treatment of gastroenterological pathologies.

Keywords: *Ganoderma lucidum*, gastroenterology, dysbiosis, immunity, antioxidants, microbiocenosis, ulcer disease, probiotics.

INTRODUCTION

In recent years, gastroenterological diseases have become among the most widespread pathological conditions worldwide, with their incidence increasing annually. Gastric and duodenal ulcers, gastritis, enterocolitis, and intestinal dysbiosis significantly affect human health and quality of life. The major etiological factors contributing to the development of these diseases include *Helicobacter pylori* infection, unhealthy nutrition, stress, prolonged antibiotic therapy, and suppression of immune function.

Long-term antibiotic administration often leads to disturbances in intestinal microbiocenosis. As a result, populations of beneficial bifidobacteria and lactobacilli decrease, while opportunistic pathogenic microorganisms become activated. These alterations contribute to the development of dysbiosis, flatulence, diarrhea, metabolic disorders, and immune deficiency states.

Currently, increasing scientific attention is focused on phytotherapy and biologically active compounds for the treatment of gastroenterological disorders. One

of the most promising medicinal mushrooms is *Ganoderma lucidum*, widely known in Eastern medicine as the “mushroom of immortality.” This mushroom contains polysaccharides, triterpenoids, antioxidants, amino acids, and microelements capable of strengthening immune defense and activating metabolic processes.

MATERIALS AND METHODS

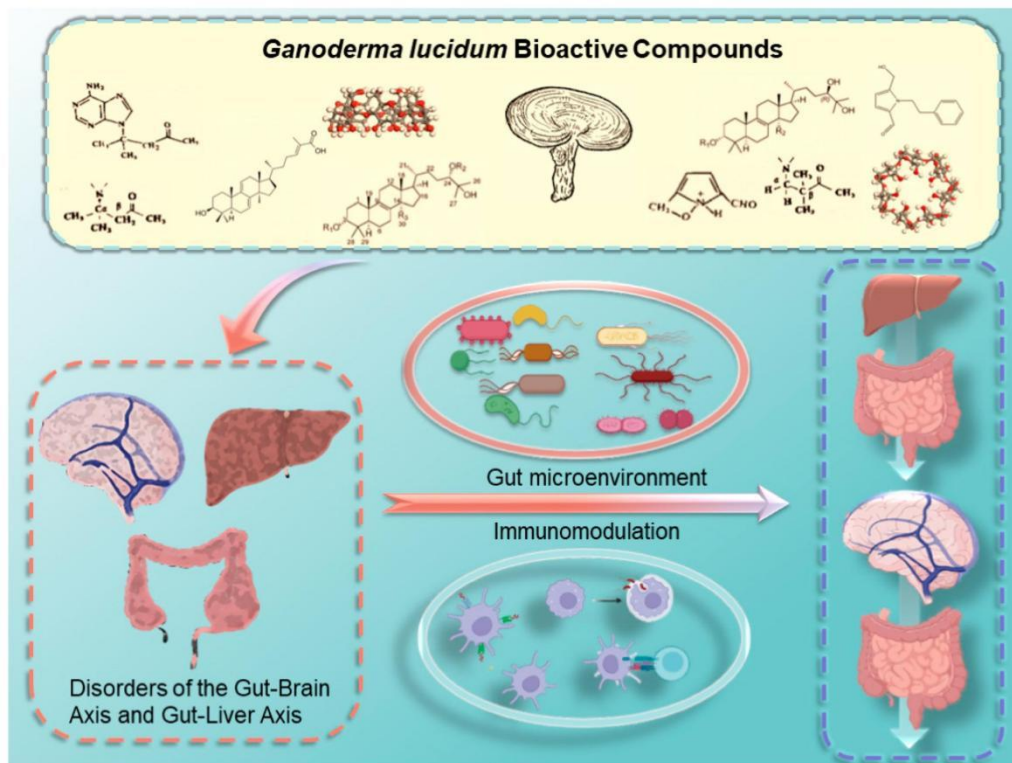
The following research methods were used during the study:

- Clinical examination
- Endoscopic examination
- Microbiological analysis
- Immunological analysis
- Biochemical examination
- Statistical analysis

The therapeutic effectiveness of *Ganoderma lucidum* extract was evaluated in patients with gastroenterological diseases associated with intestinal dysbiosis.

BIOLOGICAL COMPOSITION OF *GANODERMA LUCIDUM*

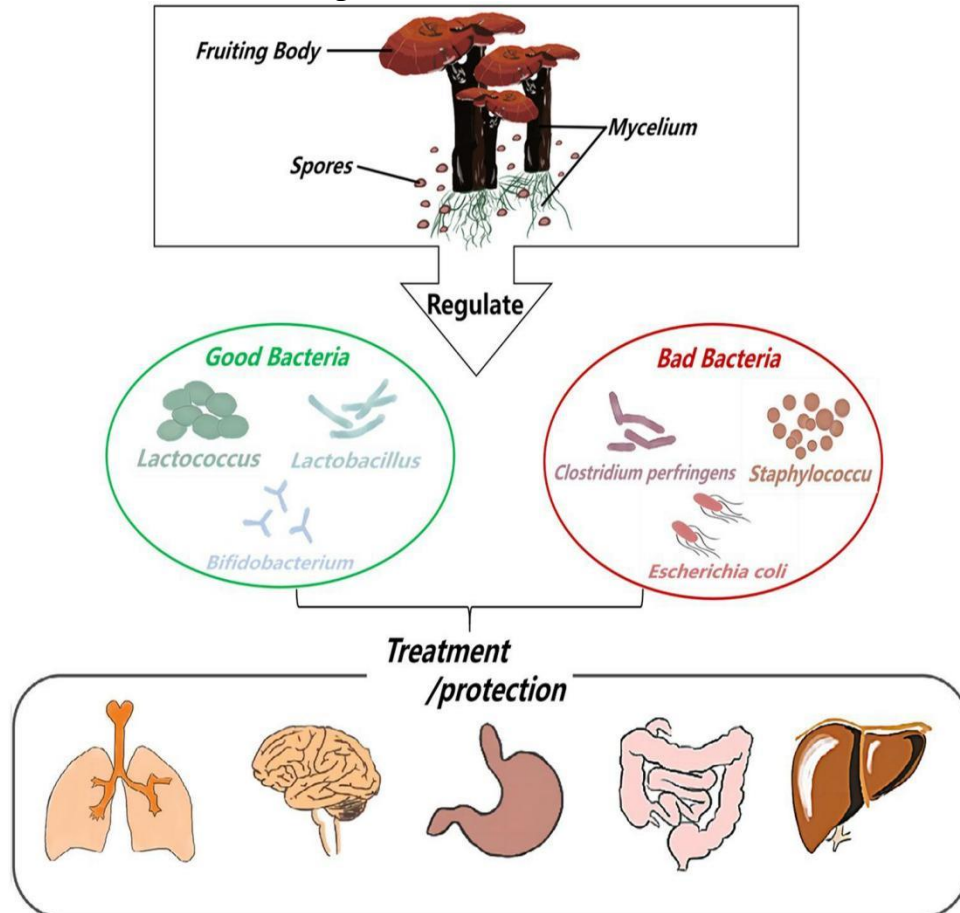
The mushroom contains a large amount of biologically active substances responsible for its pharmacological effects.



The obtained results showed that *Ganoderma lucidum* extract effectively restored probiotic intestinal flora and normalized microbiocenosis.

EFFECT ON ANTIOXIDANT ACTIVITY

Free radicals intensify oxidative stress within the organism. In gastroenterological diseases, lipid peroxidation processes become significantly activated. *Ganoderma lucidum* extract enhanced antioxidant defense mechanisms and protected cells from oxidative damage.



The reduction of malondialdehyde (MDA) levels together with increased activity of superoxide dismutase (SOD) and catalase confirmed the strong antioxidant properties of the extract.

EFFECT ON PSYCHOEMOTIONAL STATUS

Patients receiving *Ganoderma lucidum* extract demonstrated significant psychoemotional improvement during treatment. The following positive effects were observed:

- Improvement of sleep quality
- Reduction of anxiety levels
- Increased resistance to stress
- Enhancement of overall quality of life

These findings indicate the adaptogenic and neuroprotective potential of the mushroom extract.

PROSPECTS OF APPLICATION IN GASTROENTEROLOGY

Ganoderma lucidum extract may be effectively used in the комплекс treatment of the following gastroenterological diseases:

- Gastritis
- Gastroduodenitis
- Duodenal ulcer disease
- Intestinal dysbiosis
- Chronic colitis
- Irritable bowel syndrome

DISCUSSION

The results of the present study demonstrated that *Ganoderma lucidum* extract possesses high biological activity in gastroenterological diseases. Polysaccharides and triterpenoids exerted anti-inflammatory effects and accelerated regeneration of the intestinal mucosa. The antioxidant properties of the extract reduced lipid peroxidation and protected cells against oxidative stress.

Simultaneously, restoration of beneficial intestinal microflora was observed. Immunological investigations confirmed improvement of immunoglobulin and T-lymphocyte parameters. Normalization of psychoemotional status positively influenced patients' overall quality of life.

The obtained findings suggest that *Ganoderma lucidum* extract represents an effective and promising phytotherapeutic agent in the комплекс management of gastroenterological diseases.

CONCLUSION

1. *Ganoderma lucidum* is a medicinal mushroom rich in biologically active substances and antioxidants.
2. The extract contributes to normalization of intestinal microbiocenosis.
3. *Ganoderma lucidum* enhances antioxidant defense system activity.
4. Improvement of immunological indicators was observed.
5. Complex therapy reduced clinical manifestations of gastroenterological diseases.
6. Psychoemotional condition and quality of life significantly improved.
7. *Ganoderma lucidum* extract may be considered a promising phytotherapeutic agent for the treatment of gastroenterological disorders.

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