

Parasitic therapy: a potential approach for treating human diseases.

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Introduction

Parasitic therapy involves utilizing live parasites to modulate the human immune system and potentially alleviate certain diseases. The therapeutic use of parasites, particularly helminths, has gained attention due to their ability to suppress the immune response and regulate inflammation. This paper explores the underlying mechanisms of parasitic therapy and its potential applications in the treatment of autoimmune disorders and inflammatory diseases [1-3].

Mechanisms of parasitic therapy

The immune modulatory properties of helminths: Helminths can induce regulatory immune responses, promote immune tolerance, and modulate inflammatory pathways.

Interactions with the gut microbiota: Parasites can alter the composition of the gut microbiota, leading to beneficial changes in immune function [4].

Anti-inflammatory effects: Helminths secrete molecules that have anti-inflammatory properties, reducing excessive immune responses.

Applications of parasitic therapy

Autoimmune disorders: Studies have shown that parasitic infections can improve symptoms of conditions such as multiple sclerosis, Crohn's disease, and rheumatoid arthritis.

Inflammatory diseases: Parasitic therapy has demonstrated potential in managing conditions like asthma, allergic rhinitis, and inflammatory bowel disease [5].

Ongoing research and challenges

Clinical trials: Several clinical trials are underway to investigate the safety and efficacy of parasitic therapy in various diseases.

Standardization and regulation: Establishing standardized protocols for parasite administration and addressing regulatory

considerations are essential for the widespread implementation of parasitic therapy.

Ethical considerations: Balancing the potential benefits of parasitic therapy with the ethical implications of intentionally infecting individuals with parasites is a complex challenge.

Conclusion

Parasitic therapy represents an intriguing approach to the treatment of autoimmune disorders and inflammatory diseases. While further research is needed to establish its safety and efficacy, the therapeutic potential of parasitic therapy should not be overlooked. Implementing standardized protocols, addressing regulatory concerns, and engaging in ethical discussions will be crucial for advancing this field and determining its place in mainstream medicine.

References

1. Summers RW, Elliott DE, Qadir K, et al. Trichuris suis seems to be safe and possibly effective in the treatment of inflammatory bowel disease. *Am J Gastroenterol.* 2003;98(9):2034-41.
2. Weinstock JV, Elliott DE. Helminth infections decrease host susceptibility to immune-mediated diseases. *J Immunol.* 2014;193(7):3239-47.
3. Loganathan R, Järveläinen HA, Mills KI. Parasitic worms and inflammatory diseases. *Parasite Immunol.* 2018;40(3):e12514.
4. Fleming JO, Isaak A, Lee JE, et al. Probiotic helminth administration in relapsing-remitting multiple sclerosis: a phase 1 study. *Mult Scler.* 2011;17(6):743-54.
5. Broadhurst MJ, Ardeshir A, Kanwar B, et al. Therapeutic helminth infection of macaques with idiopathic chronic diarrhea alters the inflammatory signature and mucosal microbiota of the colon. *PLoS Pathog.* 2012;8(11):e1003000.

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