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ORIGINAL PAPERS

THE INFLUENCE OF PLANTS ON THE MICROBIOME IN PATIENTS WITH AUTOIMMUNE DISEASES

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Abstract. ***Background*** *It is now evident that the gut microbiota has a profound effect on the host immune system. The interactions between the gut microbiota and host immunity are complex, dynamic and context-dependent. The gut microbiota and its metabolites have been shown to influence immune homeostasis both locally and systemically. Bacterial contents such as lipopolysaccharide and bacterial antigens can induce a systemic inflammatory environment. The biggest question in the field is whether inflammation causes gut dysbiosis or dysbiosis leads to disease induction or propagation.*
Objectives *To demonstrate role of plants in the management of disfunctional immune responses. The direct modulation of gut microbiome that could diminish chronic inflammatory responses and ameliorate adaptive immune responses is major pathway to stabilize autoimmune diseases.*
Materials and methods *Recent reports indicate that dysbiosis is increased in autoimmune diseases. Plant modulation of the immune system can also have a role in the autoimmune disease, acting to reduce or delay the onset of immune-mediated diseases. Ongoing research in this field will ultimately lead to a better understanding of the role of diet and plants in chronic inflammation in patients with autoimmune diseases.*
Results *Plants may restore the composition of the gut microbiome and introduce beneficial functions to gut microbial communities, resulting in amelioration or prevention chronic inflammatory responses.*
Conclusion *The gut microbiota is considered to be a master regulator of immune homeostasis. Besides modifying the gut microbiota, plants modulate the immune system in patients with autoimmune diseases.*

Keywords: plants, autoimmune diseases, microbiome, immunomodulation

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