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THE THERAPEUTIC EFFECTS OF DENIPLANT NATURAL MODULATOR ON THE GUT MICROBIOME IN PATIENTS WITH PSORIASIS

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Psoriasis is influenced by both genetic and environmental factors, such as diet, stress-level, skin-care routine, etc.

Psoriasis is a common skin inflammatory condition, affecting approximately 3% of the worldwide population and resulting from a combination of genetic and environmental factors. Evidence for dysbiosis as a source of disease pathology is well-documented in inflammatory skin conditions, such as psoriasis.

The intestinal tract (i.e., the gut), is where the body's nutrients are absorbed, and is simultaneously inhabited by numerous microbes. An increasing body of literature suggests a crucial role for the gut microbiome in modulating systemic inflammatory disease.

Psoriasis is a chronic systemic inflammatory disease and its pathogenesis is related to the interaction between genetic susceptibility, immune response and environmental triggers.

The omics era has allowed physicians to assess different aspects of psoriasis pathogenesis such as the microbiome, infectome, and autoinfectome.

Furthermore, diet appears to play an important role in modulating disease activity, perhaps by influencing gut microbes.

Nutrition plays an important role in the development of psoriasis and it can modulate microbiota and microbiome composition.

Correct diet habits could influence not only the microbiota composition, but also microbiome composition.

It is known that also calorie restriction and low calorie diet can improve the symptomatology and the development of psoriasis.

Correct food choices may have a crucial role in the pathogenesis of psoriasis.

Life-style and dietary habits might be related to the incidence and severity of psoriasis.

There is much evidence that alterations in the skin and intestinal microbiome play an important role in the pathogenesis of psoriasis.

Given these observations, we aimed to summarize the current knowledge regarding skin-microbiome-gut-nutrients and psoriasis.

The treatment of psoriatic patients requires multidisciplinary treatment approach not only at improving skin symptoms, but also at managing metabolic, nutritional, socio-psychological comorbidities that often are associated with this disease.

A growing body of evidence highlights that intestinal dysbiosis is associated with the development of psoriasis.

The gut-skin axis is the novel concept of the interaction between skin diseases and microbiome through inflammatory mediators, metabolites and the intestinal barrier.

Several studies demonstrate differences in the microbiome composition of patients with psoriasis.

Preclinical investigations provide evidence for the role of the gut microbiome in psoriasis pathogenesis.

The dysregulated skin microbiota may become a novel therapeutic target in psoriatic patients.

Psoriasis is a common skin disease, with chronic inflammation and a complex etiology.

Notably, the pathogenesis of psoriasis, similar to other immune-associated skin diseases, is based on close interactions between components of the adaptive and the innate immune systems.

The association between the gut and skin is strong and bidirectional, and gastrointestinal health is associated with skin homeostasis.

Increasing evidence shows the existence of the gut-skin axis, and that an imbalanced gut microbiome can induce inflammatory skin diseases.

It has long been recognized that chronic skin conditions and mental health disorders are often co-morbid.

The concept of the gut-brain-skin axis emphasized in mental health disorders may also regulate the health of skin.

Notably, preliminary experiments found that oral consumption of probiotics improves the clinical symptoms in patients with psoriasis, perhaps by altering the composition of intestinal microbiota leading to changes in neurotransmitter levels.

The gut microbiome can mediate crosstalk between the immune system and the nervous system by secreting neurotransmitters in psoriasis.

Like the skin microbiota, the composition of the gut microbiota and its association with psoriasis are unclear.

The ”skin-gut axis” concept provides a new insight to investigate the association between the intestinal microbiota and the skin.

This offers a feasible approach for improving skin conditions, by the modulation of the gut microbiota.

The concept of the brain-gut-microbiome was supported by preclinical studies published during the past decade.

Several types of neurotransmitters secreted by gut microbes were selected to investigate their potential function in psoriasis.

Microbiome-mediated interventions could be designed to manipulate these targets for the treatment of psoriasis.

Furthermore, studies also found that an important connection between emotional states and inflammatory skin conditions can be regulated by bacteria of the gastrointestinal tract

Through an extensive review of the literature, we aim to discuss the skin and gut microbiota and redefine their role in the pathogenesis of psoriasis.

With the help of Deniplant brand, Gheorghe Giurgiu has developed several nutraceuticals for psoriasis that act as immunomodulators of the human microbiome.

Hence, it is crucial to understand nutraceuticals impact on the psoriatic skin microbiota which is thought to be perturbed, our study provides insight into the skin microbiota in psoriasis and how it is modulated by nutraceuticals and diet.

With the understanding that the brain-gut-skin axis exists, it is now clear that intestinal microbes have significant effects on psoriasis.

These results are supported by clinical observations based on a case series showing improvement in psoriatic skin lesions after antibiotic treatment, modulation of gut microbiota by probiotics or fecal microbial transplantation.

We confirmed the association of psoriasis and gut microbiota dysbiosis.

This study provides a detailed and comprehensive systematic review regarding gut microbiome in patients with psoriasis.

It is still not clear whether psoriasis is an effect or a cause of the observed disbalance between beneficial and pathogenic microbes.

Much less is known about the potential relationship between the composition of gut microbiome and the severity of psoriasis.

Similar to other chronic inflammatory diseases, disease activity, disease duration, comorbidities and treatment, may be also responsible for microbiota changes.

These results are supported by clinical observations based on a case series showing improvement in psoriatic skin lesions after modulation of gut microbiota by Deniplant nutraceuticals

Food choices can affect microbiome composition and improve the severity grade of psoriatic disease.

Conclusion

Unfortunately, the direct link between the skin microbiota and the pathogenesis of psoriasis remains to be clearly established.

The treatment of psoriasis, similar to other immune-mediated complex diseases, is limited to improving the symptoms, due to the lack of effective therapy.

On the basis of these findings, the treatment of skin inflammation by nutraceuticals is favored, since its therapeutic management is simple, safe, and cheap.

Nutrition can be a key factor for the development and progress of psoriasis.

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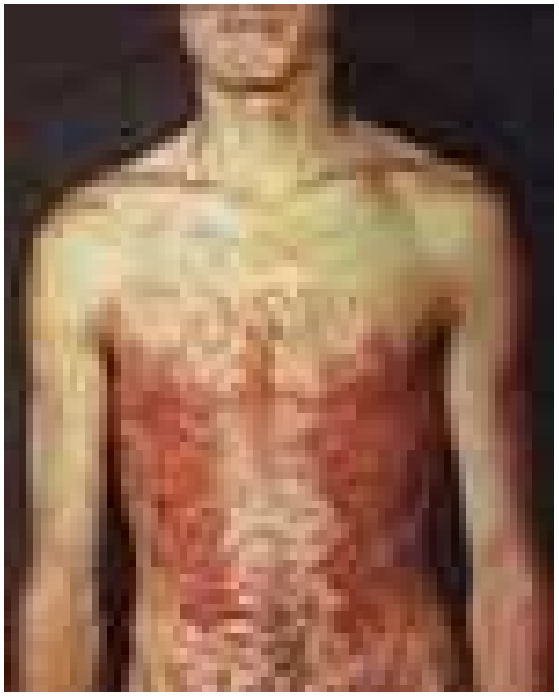

Psoriasis

Before treatment

After treatment

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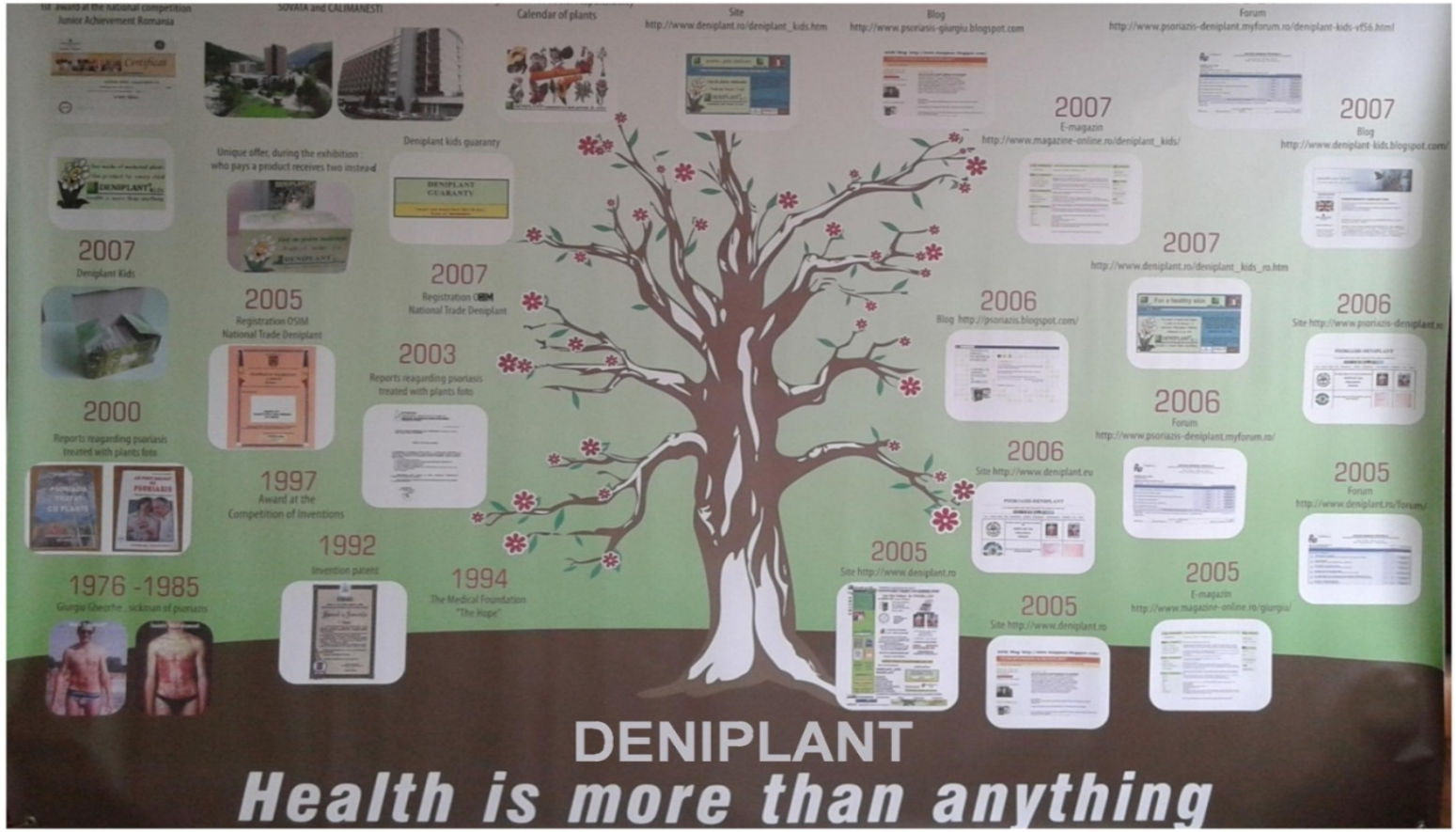

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