

**Did you know that more than half of your body is not human? The human cells make up less than half of the body's total cell count, while the rest are microbes. There are an estimated 39 trillion bacteria to about 30 trillion human cells. A collection of all microbes, such as bacteria, fungi, viruses, and their genes, that naturally live on our bodies and inside us, is called a microbiome. The gut microbiome alone can weigh up to 2kg.**

## **Why is this relevant to psoriasis?**

Researchers are now looking at the relationship between the gut microbiome and psoriasis; recent advances in immunology have enabled the development of therapies that can dramatically reduce symptoms.

In an article published in *The International Journal of Molecular Science*, it has been reported that there have been some advances in the understanding of the microbes in the gut and their implications for the treatment of psoriasis, including the potential for treatments based on the gut microbiome.

Researchers have suggested that psoriasis studies have been wide-ranging because there is still so much about the disease that is misunderstood. One of the unsolved mysteries in psoriasis has been why systemic inflammation has its most prominent symptoms on the skin and joints. It is suggested tissue resident cells play an important role.

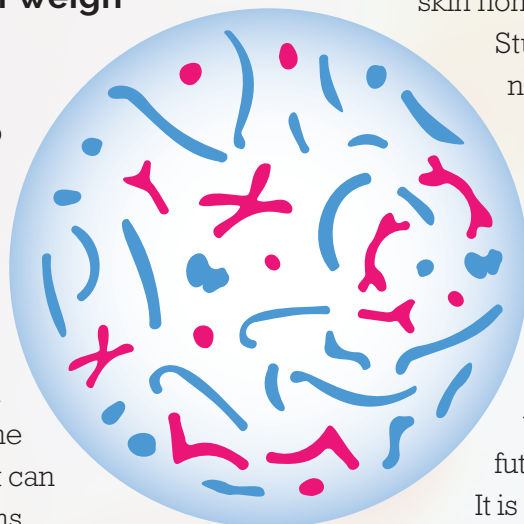
One area of emerging research with potentially broad implications for psoriasis is the gut

microbiome. One possible pathway to better understanding psoriasis is dysbiosis in gut microbiota (an imbalance between the types of organism present in a person's natural microflora, especially that of the gut) of people with psoriasis, though is not clear if the imbalance has a pathogenic role or is simply a result of systemic inflammation.

The gut and the skin are organs with crucial immune and neuro-endocrine roles and are uniquely related in purpose and function. The intimate relationship between these organs is referred to as the skin-gut axis and numerous studies have linked gastrointestinal (GI) health to skin homeostasis.

Studies suggest that a number of new therapeutic approaches to psoriasis could be coming; accumulating evidence in the gut-skin axis would favour a nutritional approach or signal inhibition to change microbiome composition, which could increase therapeutic options available for future psoriasis treatments.

It is a complex area and needs further research and understanding of how the microbiome influences the skin and joint manifestations seen in psoriatic disease. It will be interesting to see how this exciting area of research develops in the future.



## **Source and reference:**

**Komine M. Recent advances in psoriasis research; the clue to mysterious relation to gut microbiome. *International Journal of Molecular Sciences*. 2020; 21(7):2582. doi: 10.3390/ijms21072582.**