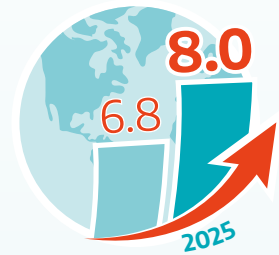


Tackling a globally increasing disease with algae

What is inflammatory bowel disease?

Globally, over 6.8 million people suffer from inflammatory bowel disease (IBD), and the number is increasing. IBD comprises a group of chronic diseases, such as Crohn's disease, that damage the digestive tract and impair organ functioning. Despite significant therapeutic advancements in recent decades, current treatments do not work for everyone and can negatively impact some patients' immune systems. Therefore, there is a pressing need for new therapeutics to effectively treat the symptoms of IBD in the long term.



What happens in the gut during IBD?



Inflammation & pain

In IBD the immune system becomes dysregulated leading to chronic recurring inflammation within the digestive organs. This inflammation results in bowel injury and severe pain.



Dysbiosis

IBD patients often have a higher proportion of bacteria in their gut that can trigger inflammation. This imbalance in the composition of the microbial gut community is called dysbiosis.

How can algae help treat IBD?



Anti-inflammatory & pain-relieving

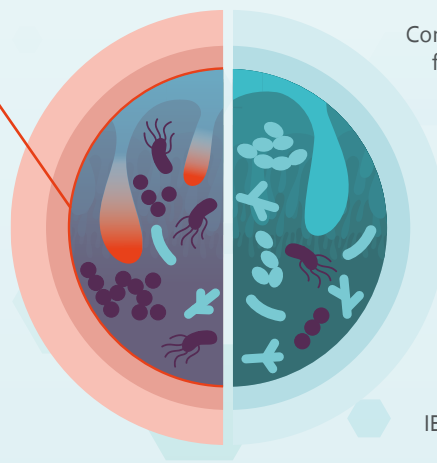
Algae produce anti-inflammatory compounds that can re-regulate an overactive immune system, thereby reducing tissue swelling and the associated pain. Algae compounds could also block messenger molecules that tell the brain where we feel pain. If our brain doesn't notice, neither do we.



Prebiotic

Certain algae metabolites can stimulate the growth of beneficial gut bacteria like lactobacilli, known to alleviate IBD symptoms. As prebiotics, these algae metabolites can enhance the number of microorganisms that are beneficial for the treatment of IBD, which then also displace harmful bacteria.

Algae4IBD – bringing relief for IBD patients



Combining drugs and prebiotics is important for the future treatment of IBD to restore and maintain a functioning immune system and simultaneously a healthy gut microbiome.

At Algae4IBD, international experts are looking for algae compounds that are effective against dysbiosis, pain, and inflammation. The team's aim is to develop these health-beneficial compounds into food supplements, oral drugs and other preventive and therapeutic agents for IBD.

This factsheet is based on the publication "Inflammatory bowel disease - A peek into the bacterial community shift and algae-based 'biotic' approach to combat the disease"



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Algae4IBD