

# Lacprodan® CGMP-20

Clinical studies of Lacprodan® CGMP-20 - a highly purified casein glycomacropeptide - show beneficial effects in IBD patients

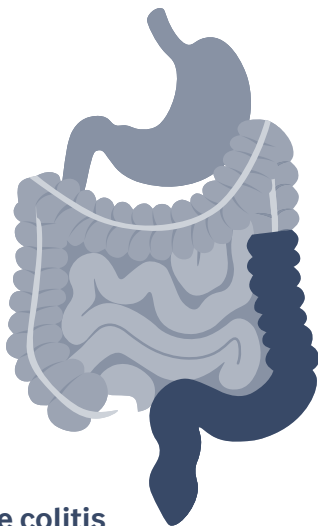
Patients with active intestinal inflammation may benefit from supplementing their usual medical treatment with a daily dose of 30g of Lacprodan® CGMP-20

## What is inflammatory bowel disease

Inflammatory bowel disease (IBD) is a condition characterised by inflammation of the gastrointestinal tract but which can affect the entire body. Symptoms include abdominal pain, malabsorption, diarrhoea, rectal bleeding and weight loss. Disease activity switches between flares (active inflammation) and remission, the aim of therapy being to keep the patient in remission.

The primary IBD disorders are ulcerative colitis (UC) and Crohn's disease (CD). The former is the most globally prevalent.<sup>1</sup>

Although the precise cause is unknown, IBD is a heterogeneous and multi-factorial disease, where genetics, environment, autoimmunity, diet, stress and the gut microbiome may all play a role.<sup>1,2</sup>



## Ulcerative colitis

- Affects the colon
- Ulcerations
- Lesion in mucosal layers<sup>1</sup>



## Crohn's disease

- Can affect any part of the gastrointestinal tract
- Strictureing and penetrating
- Lesions are focal and transmural (deeper into the tissues)<sup>1</sup>

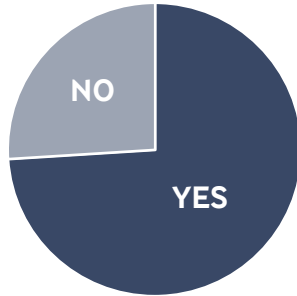
### How can IBD be treated?

IBD is treated with anti-inflammatory drugs, but the risk of side-effects is high.<sup>3</sup> Patients have shown interest in dietary supplement solutions to work along side normal treatment. This is due to the chronic the chronic and relapsing nature of the condition.

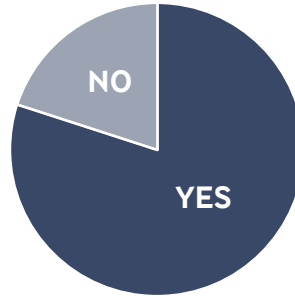
### Why is CGMP-20 a unique solution?

Lacprodan® CGMP-20 is a highly purified casein glycomacro-peptide product with a very low level of the amino acid phenylalanine, making it relevant for medical foods.

Would you consider GMP as an alternative treatment?



Would you consider GMP as a supplement to treatment?



Lacprodan® CGMP-20 was well tolerated and accepted by the patients, who reported positive effects when using it as a supplement or alternative to treatments.<sup>9</sup>



The prevalence of IBD is highest in **Europe** and **North America**, but is also increasing in other regions as they become industrialised.<sup>4</sup>

IBD results in **large direct and indirect costs**, including surgical, medical and the value of lost earnings and productivity. In the US, IBD is ranked as 1 of the 5 most expensive gastrointestinal tract disorders.<sup>5</sup>



IBD patients are at **higher risk of colon cancer** due to the fact that inflammation within the colon causes a continuous turnover of cells in the intestinal lining, increasing the risk of irregularities that may lead to cancer. 10-15% of the annual deaths among IBD patients are due to colorectal cancer.<sup>6</sup>

Most people with IBD are diagnosed between **the age of 20 and 40**, when at the prime of their working life. This adds to the indirect costs.<sup>7</sup>

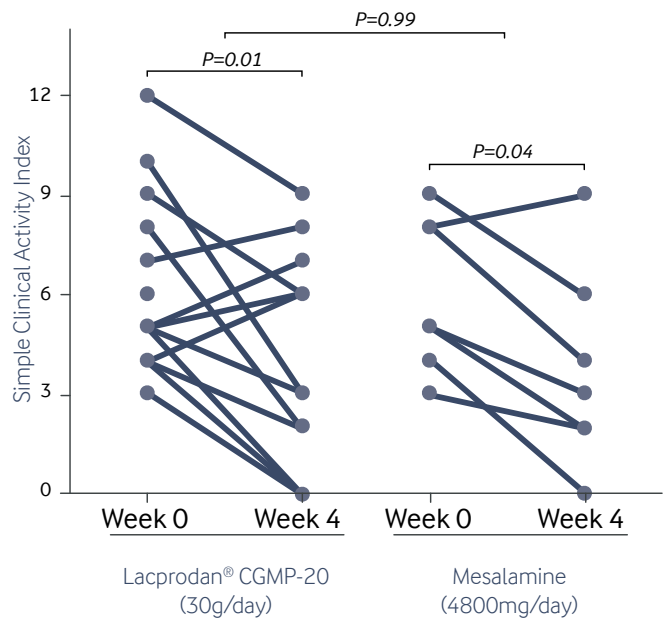
After 30 years of disease, up to a third of patients with UC will require surgery. Approximately **70%** of patients with CD will require surgery.<sup>8</sup>



A series of studies have documented the anti-inflammatory properties of CGMP in a rodent model of colitis.<sup>10, 11, 12</sup> The findings show that CGMP has similar efficacy to an established drug (5-ASA). On this basis, Arla Foods Ingredients partnered with Aarhus University in Denmark to investigate the effect of CGMP in patients with ulcerative colitis. The clinical trial tested a daily 30g dose of Lacprodan® CGMP-20 as a supplement to a standard mesalamine treatment. This was compared to a patient group that received a high 4800mg dose of mesalamine. Patients were followed for four weeks to observe the potential effect on the Simple Clinical Colitis Activity Index.

The study found that Lacprodan® CGMP-20 had a similar remission-inducing effect on ulcerative colitis as the increased dose of mesalamine.<sup>9</sup>

This finding was confirmed in the first four weeks of a 12-week intervention study where Lacprodan® CGMP-20 was compared with a control in patients with active distal ulcerative colitis and, in particular, patients with proctitis.<sup>13</sup>



### Proposed mechanisms causing the beneficial effect

Immune modulating effect<sup>14</sup>

Antimicrobial and prebiotic effect<sup>14</sup>

CGMP-20 contains 18% threonine, which may protect the mucus layer in the gastrointestinal tract<sup>15</sup>

Pathogen decoy and toxin binding to glycan chain<sup>14</sup>

### Lacprodan® CGMP-20 is a unique ingredient



Non-GMO



rBST-free



From grass-fed cows

## References

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