

# Beyond the GF Diet: New Advances in Celiac Disease and Mental Wellbeing



**María van der Hofstadt Rovira**

*Pharmacist, AOECS Scientific Manager*

**AOECS**  
Association of European Coeliac Societies



**Gluten Free  
Alliance™**

# Introduction

**Celiac disease is a chronic autoimmune condition** that affects millions of people worldwide. Often misunderstood or diagnosed late, **the gluten-free diet remains the main treatment.**

In recent years, **research has brought exciting progress toward new therapies and medications that may improve disease management and quality of life.** Science is currently exploring innovative approaches that aim not only to reduce symptoms also to address the underlying immune response triggered by gluten.

At the same time, **living with celiac disease involves more than just dietary changes,** it can also have a meaningful impact on mental health and emotional wellbeing.





# World Health Organization

**“Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity.”**



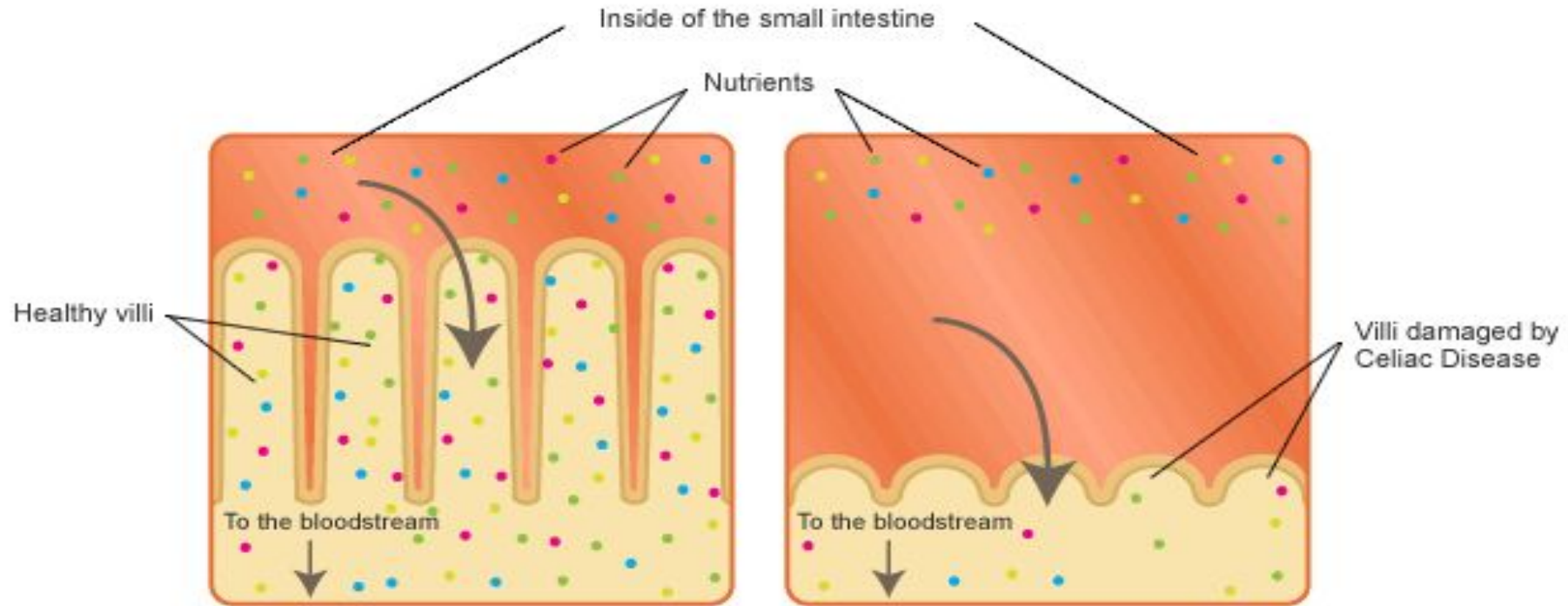
Coeliac disease is a lifelong autoimmune disease present in genetic predisposed people where the immune system will attack and damage parts of your own body if food containing gluten is eaten.

For those with the condition, mistakenly triggers the immune system to produce antibodies attacking the small intestine when gluten is eaten.

Gluten is found in 3 types of cereal; wheat, barley and rye; and any products using those cereals, like bread, pasta, cakes, biscuits and sauces.



This adverse reaction to gluten damages the microvilli lining the small intestine, disrupting the body's ability to take in nutrients from food. If coeliac disease remains undiagnosed, microvilli can die off and vital nutrients can no longer be absorbed. This can result in symptoms ranging from minor discomfort to life-threatening conditions like severe anaemia.



A. In a healthy person, nutrients get absorbed by villi in the small intestine and go into the bloodstream.

B. In a person with Celiac Disease, the villi have been damaged by inflammation, so fewer nutrients pass into the bloodstream.

## The only treatment for coeliac disease is removing all gluten from your diet.

Learning what you can and cannot eat is crucial to prevent symptoms and discomfort. Luckily, there are many naturally gluten free foods and a wide range of processed gluten free food is available.

- Changes in eating habits.
- Understanding food groups.
- Learning to read and understand food labels.
- Following a healthy, balanced diet.
- Sticking to it strictly throughout your life.
- Keeping a constant watch out for potential risks.





According to the World Health Organization (WHO/OMS), adherence is defined as the extent to which a person's behavior—taking medication, following a diet, and/or executing lifestyle changes—corresponds with agreed recommendations from a healthcare provider.

Following the GF diet correctly has a direct impact on our health.

It helps prevent other illnesses or complications from arising and it is important to strive to do your very best at all times. Because there will always be excuses not to.

Adapting to the diet and the changes it entails means that people with coeliac disease have to change their habits and face different situations with the best possible attitude.

We are social beings, and there are many situations in which food plays a central role.



The adaptation and all the questions around the diagnosis and the limitations due to the condition, have a direct impact in mental health of the patients.



Don't let your condition hold you back; don't let it become a limiting factor.

Look for strategies and solutions to help you and deal with the different situations you may have.



# World Health Organization

"Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity." An important implication of this definition is that **mental health is more than just the absence of mental disorders or disabilities.**

- Mental health is more than the absence of mental disorders.
- Mental health is an integral part of health; indeed, there is no health without mental health.
- Mental health is determined by a range of socioeconomic, biological and environmental factors.
- Cost-effective public health and intersectoral strategies and interventions exist to promote, protect and restore mental health.



## **Mental health is an integral and essential component of health.**

Mental health is a state of well-being in which an individual realizes his or her own abilities, can cope with the stresses of life, work productively and make a contribution to his or her community. It is fundamental to our collective and individual ability as humans to think, emote, interact with each other, earn a living and enjoy life.



On this basis, the promotion, protection and restoration of mental health can be regarded as a vital concern of individuals, communities and societies throughout the world.

Linking it with Coeliac Disease, we know that many individuals experience a lot of anxiety, stress, depression and other mental problems due to the challenges and social limitations, related with the diet and pressure of maintaining strict dietary control.

**Understanding this connection between physical and mental health is essential for providing truly comprehensive care.**



In the case of coeliac disease, the role of the carer falls to the patient's social circle; therefore, family, friends and patient organisations are essential.

**Empowering patients by giving them access to information makes them feel more confident and changes the relationship between the patient, their condition and their environment.**

Ensuring that patients are active, aware of their situation and involved in their own self-care has a direct impact on treatment adherence.

Share your situation with your friends and family, explain your limitations; that way, they'll empathise with you and help you cope with things, and they'll take you into account when making plans.





**Are you going to miss out on seeing your favourite band live?**

**Are you going to miss that special day with friends or family?**

**Are you not going to go out for the festivities in your town?**

**Meeting other people with coeliac disease empowers us**, because it shows us that we are not alone and that there are others facing the same challenges as we do.

Learning from **others' experiences gives us tools** that can help us deal with different situations in the future.

We realise that we all come from very different backgrounds, different moments of diagnosis and experiences but that we have something in common that defines us and brings us together.

**We can create strong networks that are powerful and have a direct impact in our quality of life.**






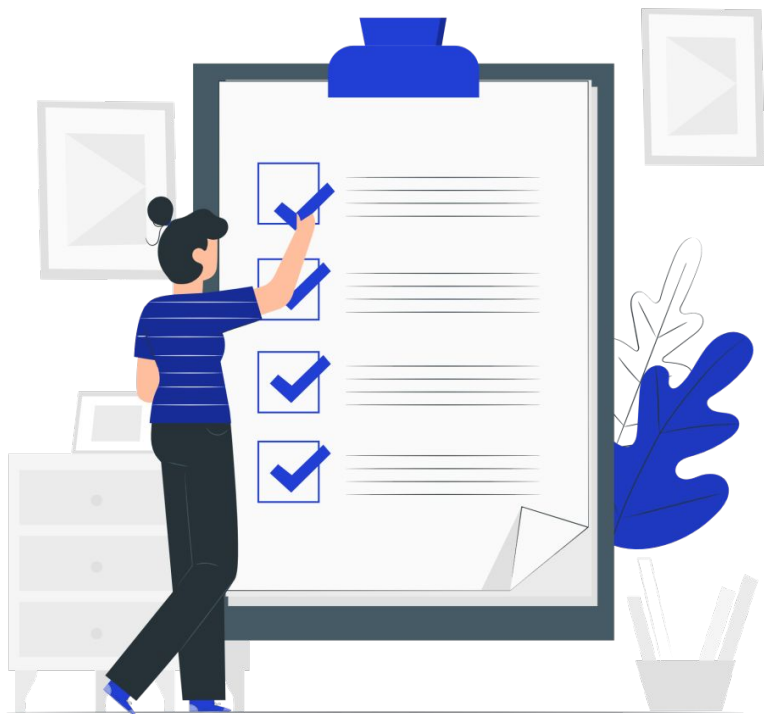


Currently, **the only available treatment that has proven to be effective and safe is a gluten-free diet**, but there are different research lines aimed to explore other alternative therapeutic options that could either complement or ultimately replace the gluten free diet.

At this moment, none of these approaches have proven to be enough effective and safe for patients and the different ones are at different stages of their clinical trials.

# Why a drug for Coeliac Disease?

- 
- **Neutralize the risk posed by voluntary or involuntary transgressions.** (Adherence studies estimate that adherence to a gluten-free diet in adolescents and adults is poor. Between 30-69% make transgressions).
  - **Residual gluten in manufactured products** (<20 mg/kg).
  - **Nutritional deficiencies associated with a gluten-free diet** (fiber, Fe, Ca, Mg, vit. B9, B1, A).
  - Additional **cost of gluten-free products.**
  - **Refractory CD.** Non-responsive to GFD.



## Associació Celíacs de Catalunya

A 2024 survey conducted by Celíacs de Catalunya indicates that:

- **50%** of patients would be willing to take a pill every day if it meant they could stop following a gluten-free diet.
- Around **10%** of those surveyed would be willing to get a weekly vaccination for the same reason.

# Where we are?

## Gluten Free Diet

Gluten-free cereals, pseudo-cereals, low-toxicity gluten cereals, genetically modified gluten cereals to reduce their toxicity, or pretreated gluten flours (with proteases or microorganisms).

**Effective and without side effects.**



# Where science want to go

## Gluten free diet

+ **Drugs / food supplements**

Gluten-free diet and medications or dietary supplements that can help in cases of contaminations or when we think a contamination may happen.

## Non restrictive Diet

+ **Drugs**

A free diet and chronic medication that modulate the body's response to gluten intake. **Not enough effective already and with some side effects.**

# How we get there keeping in mind that...

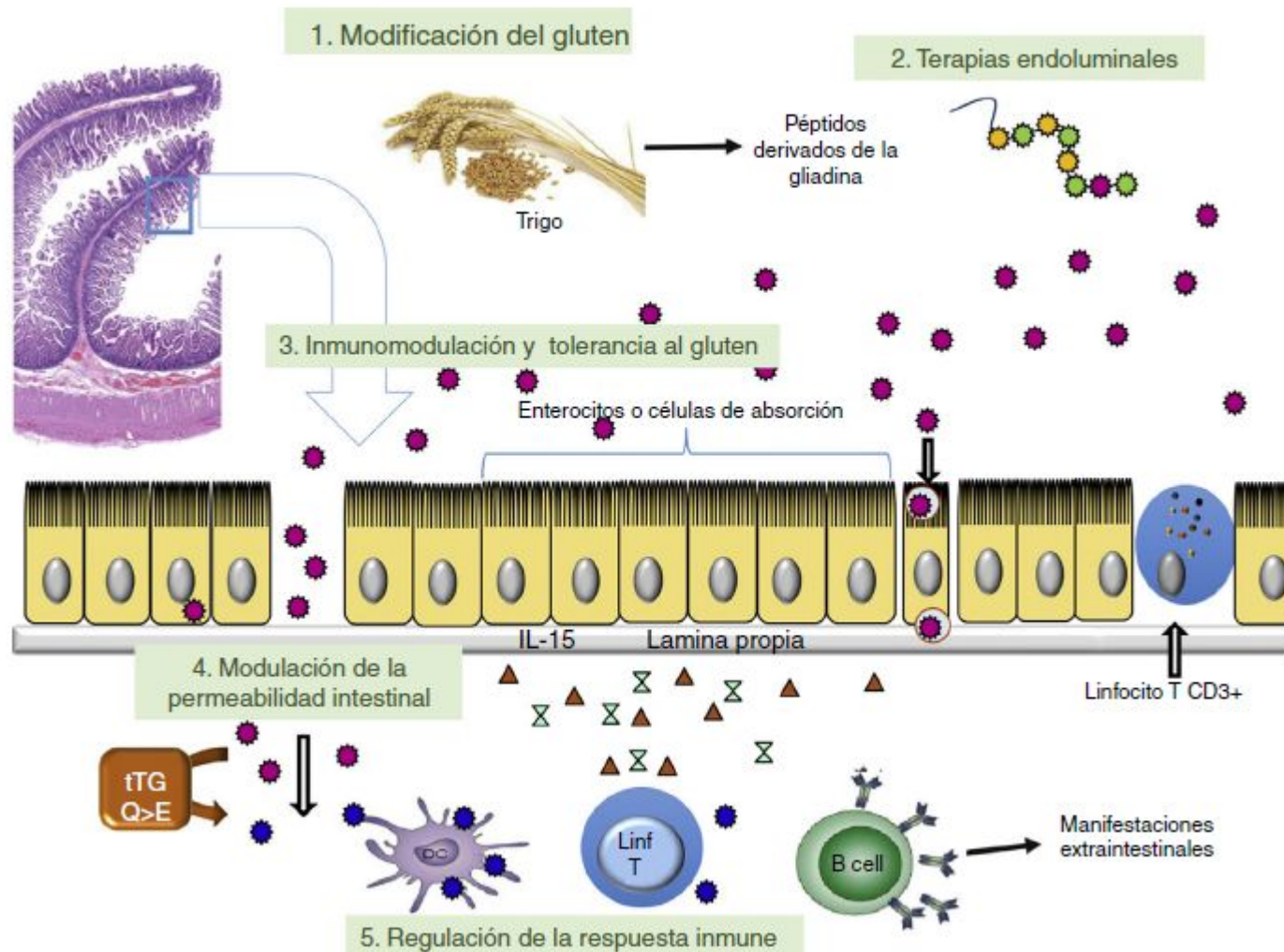
“**First, do no harm**” is the most fundamental principle of any health care service.

**Patient safety** is defined as “the absence of preventable harm to a patient and reduction of risk of unnecessary harm associated with health care to an acceptable minimum.”

Within the broader health system context, it is a framework of organized activities that creates cultures, processes, procedures, behaviours, technologies and environments that lower risks, reduce the occurrence of avoidable harm and reduce impact of harm when it does occur.”



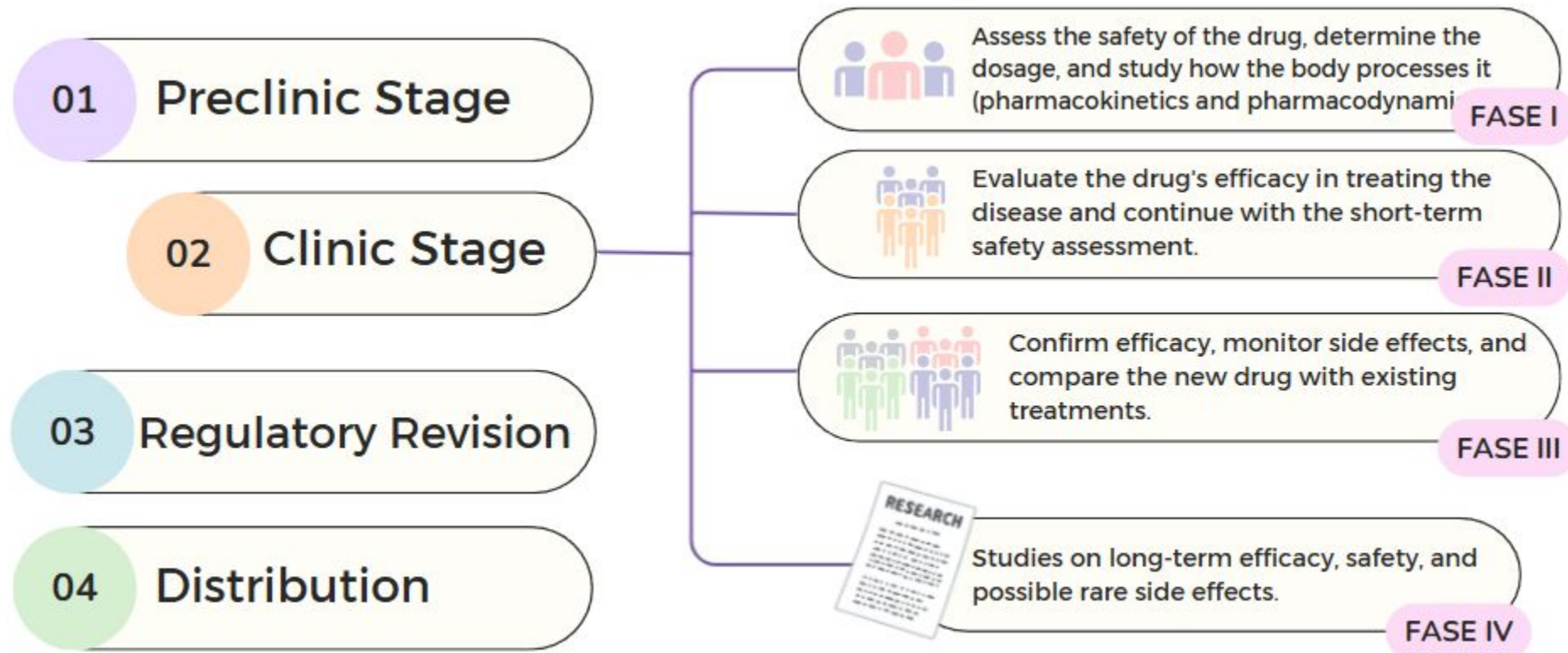
# Main pathogenic targets



Protease-based drugs to neutralise accidental gluten intake, molecules that mask the protein, substances that prevent increased intestinal permeability, or transglutaminase enzyme inhibitors.

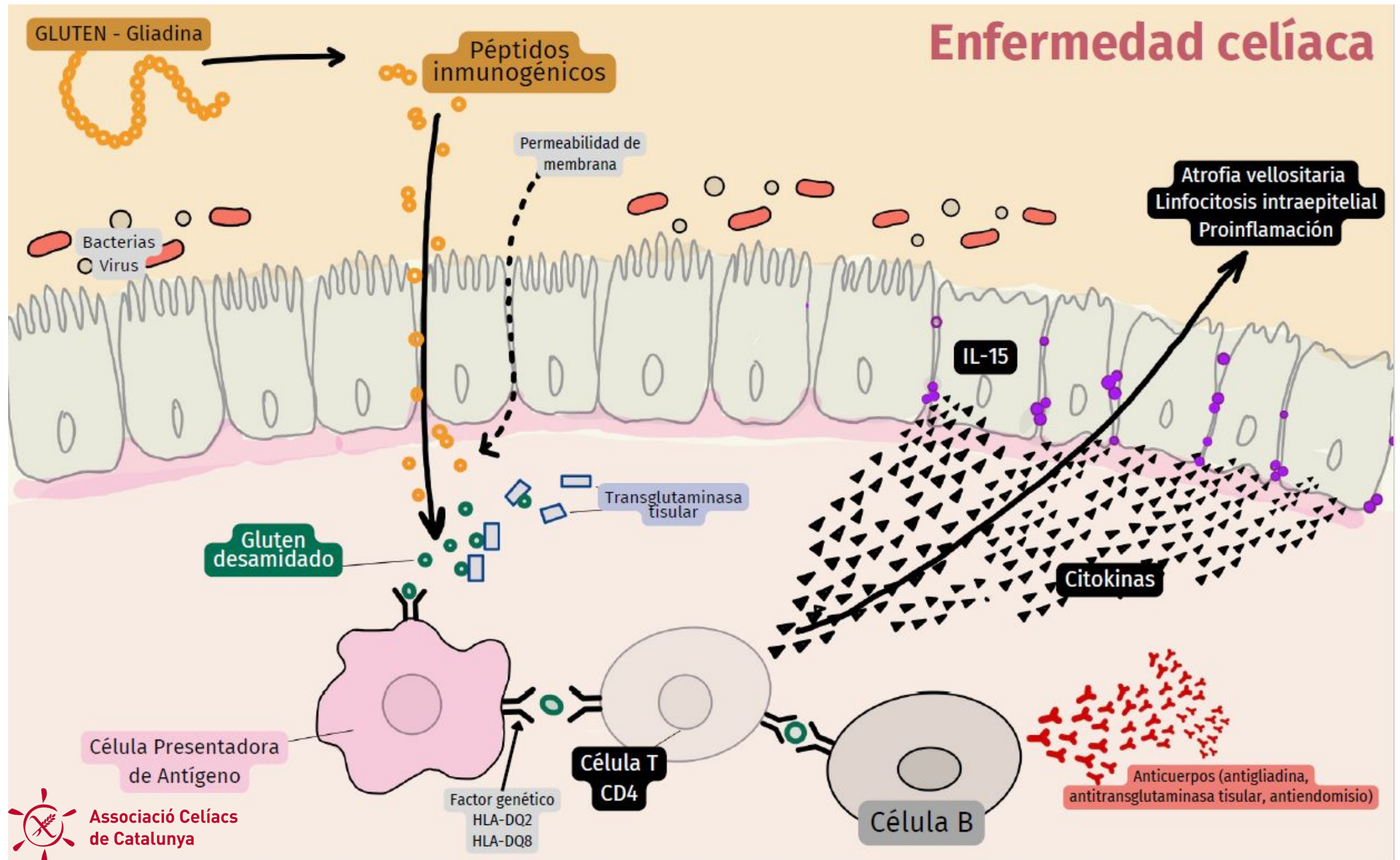
As well as therapies that would require intravenous administration are based on biological drugs or immunomodulators (vaccines) that seek to prevent intestinal inflammation.

# How close are these options?



The heterogeneity in populations, inclusion criteria, and outcome measures of the trials limits the comparison and generalization of their findings.

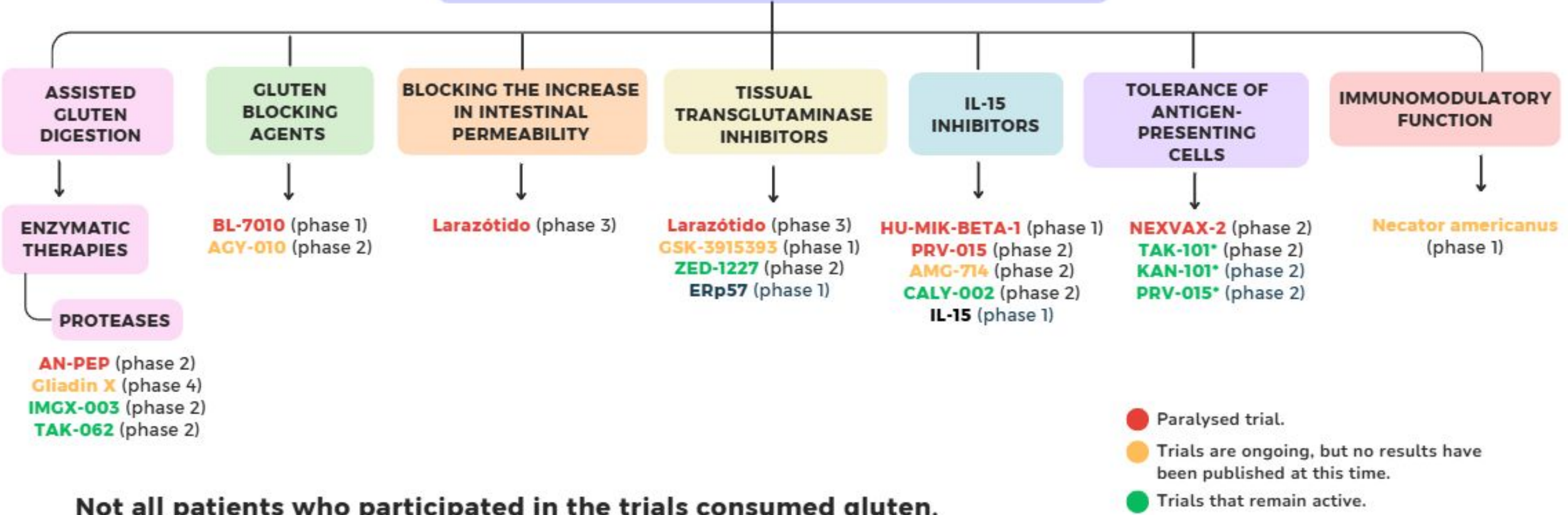
# Enfermedad celíaca



# Open Approaches for the main pathogenic targets:

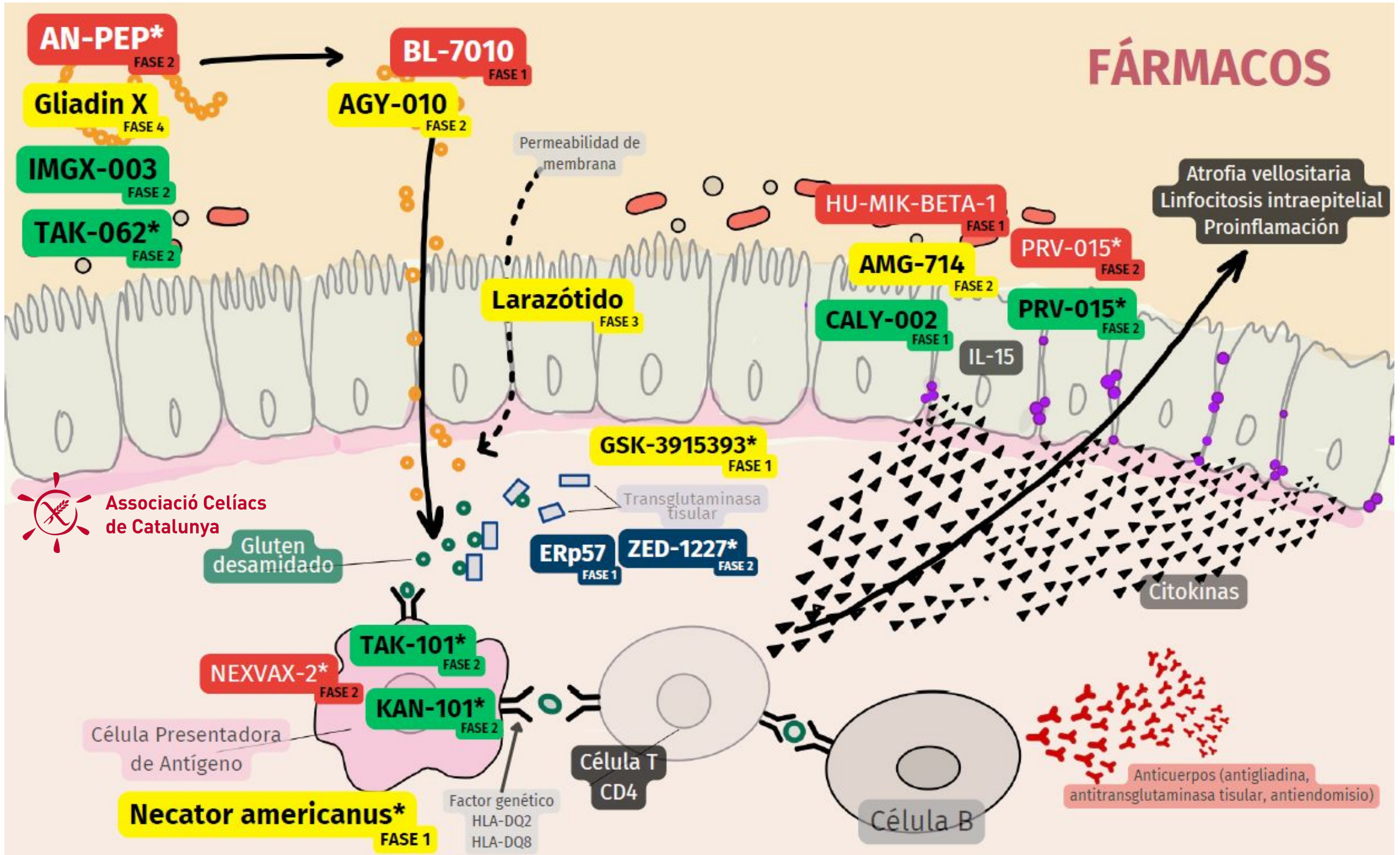
- Assisted digestion of gluten
- Gluten blocking agents
- Blocking the increase in intestinal permeability
- Tissue transglutaminase inhibitors
- IL-15 inhibitors
- Tolerance of antigen-presenting cells
- Immunomodulatory function

# OPEN LINES OF RESEARCH



**Not all patients who participated in the trials consumed gluten.**

# FÁRMACOS



Associació Celíacs de Catalunya

Gluten desamidado

Célula Presentadora de Antígeno

Necator americanus\* FASE 1

Factor genético HLA-DQ2 HLA-DQ8

Célula T CD4

Célula B

Anticuerpos (antigliadina, antitransglutaminasa tisular, antiendomiso)

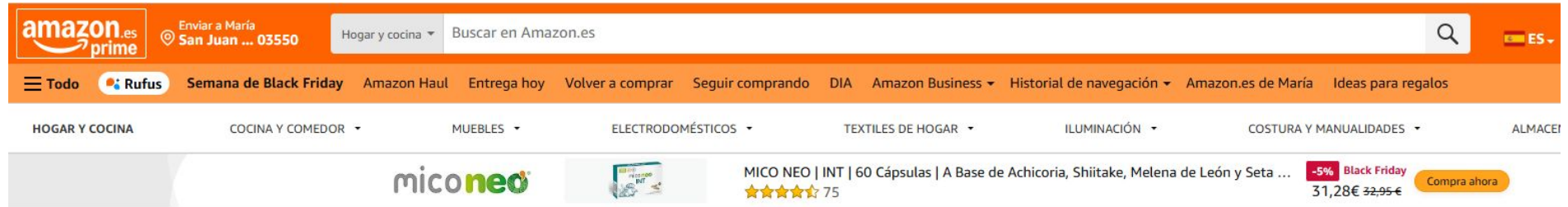
Atrofia vellositaria  
Linfocitosis intraepitelial  
Proinflamación

Citokinas

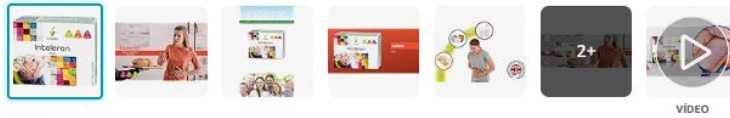
Permeabilidad de membrana

Transglutaminasa tisular

# So, what are these “anti-gluten” tablets sold online (and even in pharmacies)?



Haz clic para ver la vista completa



## Novadiet - INTOLERAN Comprimidos con Enzimas - Mejora la Digestión de Gluten, Lactosa y Alimentos Vegetales - Favorece la Salud Digestiva - 30 Comprimidos Recubiertos

Marca: NOVA DIET

4,0 ★★★★★ (33) | Haz preguntas y busca opiniones

Opción Amazon

50+ comprados el mes pasado

-16 % 11,50 € (0,38€ / unidad)

Precio recomendado: 13,65€

Los precios de los productos vendidos en Amazon incluyen el IVA. Dependiendo de tu dirección de entrega, el IVA puede variar al finalizar la compra. Para obtener más información, haz clic aquí.

¿Compras para la empresa? Ahorra 35% hasta 100 € en Amazon Business. Regístrate para obtener una cuenta de empresa gratuita.

Disponible con Envío Prime gratis de [otros vendedores de Amazon](#).

- AYUDA A MEJORAR LA DIGESTIÓN DEL GLUTEN: INTOLERAN es un complemento alimenticio diseñado para ayudar a mejorar la digestión del gluten oculto presente en algunos alimentos, previniendo la hinchazón, el dolor y las molestias abdominales que pueden aparecer después de las comidas.
- AYUDA A MEJORAR LA DIGESTIÓN DE LA LACTOSA: Las enzimas presentes en INTOLERAN ayudan a mejorar la digestión de los productos que contienen lactosa, permitiendo una mejor tolerancia y evitando los síntomas incómodos asociados a la intolerancia a la lactosa.

11,50 € (0,38€ / unidad)

Entrega GRATIS diciembre. [Ver...](#)

Enviar a María 03550

En stock

Cantidad: 1

Añadir a

Comprar

Remitente / Vendedor

Devoluciones

Garantía legal

Atención al cliente

Ver más

Añadir a la Lista

# They are food supplements.

- **Food supplements:**

- Concentrated sources of nutrients or substances with nutritional or physiological effects.
- Marketed in measured doses.
- They are intended to supplement the diet and support physiological functions.

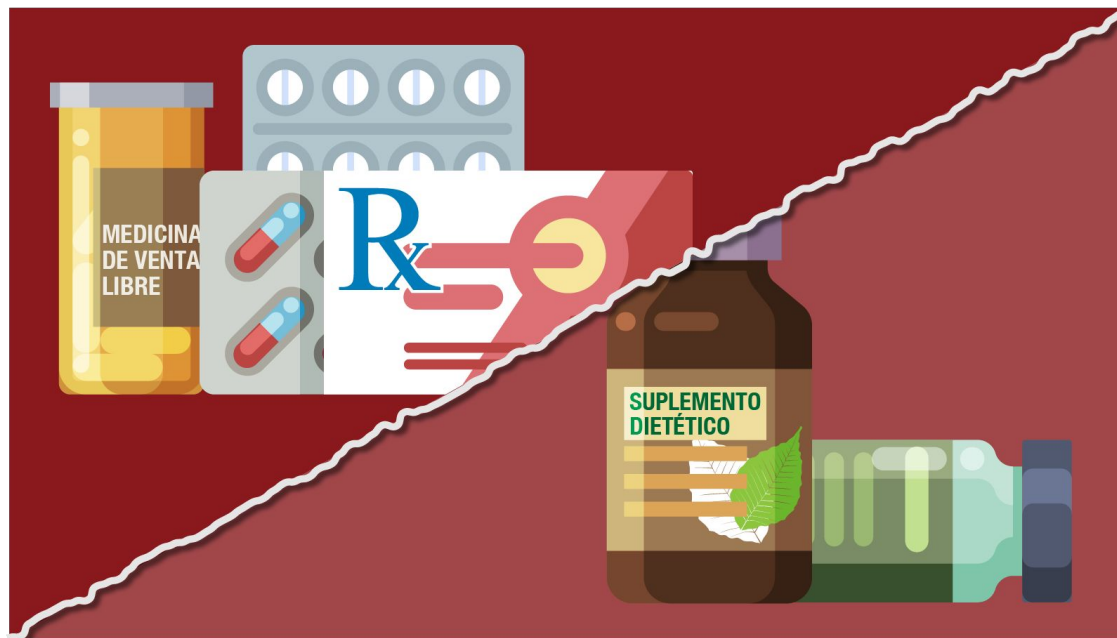
- **Drug/medicine:**

- Consists of an active ingredient (substance with systemic activity) and excipients (vehicles for preparation, stability, modification of properties and bioavailability).
- The combination of active ingredient and excipients forms the pharmaceutical form, resulting in the medicine.
- Designed to treat, cure or prevent diseases.



# They are food supplements.

The fact that **food supplements** are marketed in measured doses (capsules, pills, tablets, drops, etc.) often misleads patients, who interpret these types of products as a solution that will allow them to stop dieting.



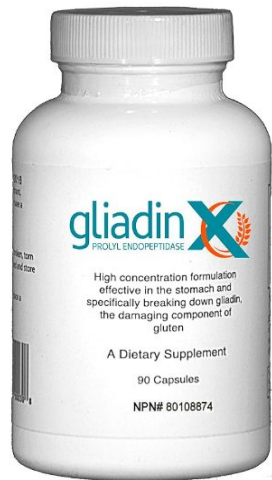
**Which are the most common?**

# Food Supplements



The manufacturers themselves warn that **these products are not intended to replace a gluten-free diet**, but they raise doubts and uncertainty among patients and healthcare professionals.

Furthermore, these types of products are **easily found online** and are increasingly common in pharmacies.



# Probiotics and prebiotics: prospects for biotic interventions in patients with CD.



Since 2004 it has been known that the microbiota of people with coeliac disease has characteristic patterns in its composition.

A decrease in specific strains of Bifidobacterium and Lactobacillus has been observed, as well as an increase in potentially pathogenic species, including pro-inflammatory bacteria such as Bacteroides and Enterobacteriaceae. Patients have microbial dysbiosis that is only partially recovered with GFD.

These differences were found not only in patients with active CD, but also in their first-degree relatives and in genetically predisposed individuals, suggesting that the microbiota may be involved before clinical symptoms appear.

## **Fuente:**

*Valitutti F, Cavalli E, Leter B, Leonard M, Alessio F, Cucchiara S. Coeliac disease and microbiota: is it time for personalised biotics intervention? A scoping review. BMJ Nutrition, Prevention & Health. 2025;8:*

Probiotics	Prebiotics	Symbiotics	Postbiotics
partially improved gastrointestinal symptoms and reduced inflammatory markers.	promoted the growth of beneficial bacteria, although the clinical effect was unclear.	showed promising results in some studies, but the evidence is weak.	They are mostly in the preclinical phase, with very limited clinical data.

It is still unclear whether changes in the microbiota are a cause or consequence of CD. However, the gut microbiota could play an important role in the future management of the disease.

Biotic interventions show promising results in small, short-term studies and could complement a gluten-free diet.

**Fuente:**

*Valitutti F, Cavalli E, Leter B, Leonard M, Alessio F, Cucchiara S. Coeliac disease and microbiota: is it time for personalised biotics intervention? A scoping review. BMJ Nutrition, Prevention & Health. 2025;8:*

# Conclusions

- The **GFD remains the only effective treatment for coeliac disease**; no current drug can replace it.
- There are relevant pharmacological approaches:
  - **ZED 1227**, the most advanced candidate
  - **TAK-101**, a promising immunological pathway that requires further research.
- Complementary drug therapy is necessary for many patients, for whom a gluten-free diet is a major challenge, offering potential relief and improvement in their quality of life.
- In the future, it is crucial to:
  - Identify specific patient subgroups.
  - Define meaningful endpoints.
  - Implement uniformity in trial methodology.
- **Pharmacological therapies are not yet ready for practical use, but could become a complementary option in the coming years.**

# Q&A

# Thank you



[maria.vanderhofstadt@aoecs.org](mailto:maria.vanderhofstadt@aoecs.org)



**AOECS**  
Association of European Coeliac Societies



**Gluten Free  
Alliance™**