

A NEW FRONTIER IN PROBIOTICS

WHAT ARE SCBIOTICS™

Scobiotics™ are syntrophic mixed cultures of good bacteria as well as other beneficial organisms, which take into account the complexity of the microbiome.



Utilise each other's by-products for a holistic approach to gastrointestinal health and function



Allow probiotics to flourish and multiply faster



Site-specific formulas to stabilise beneficial species



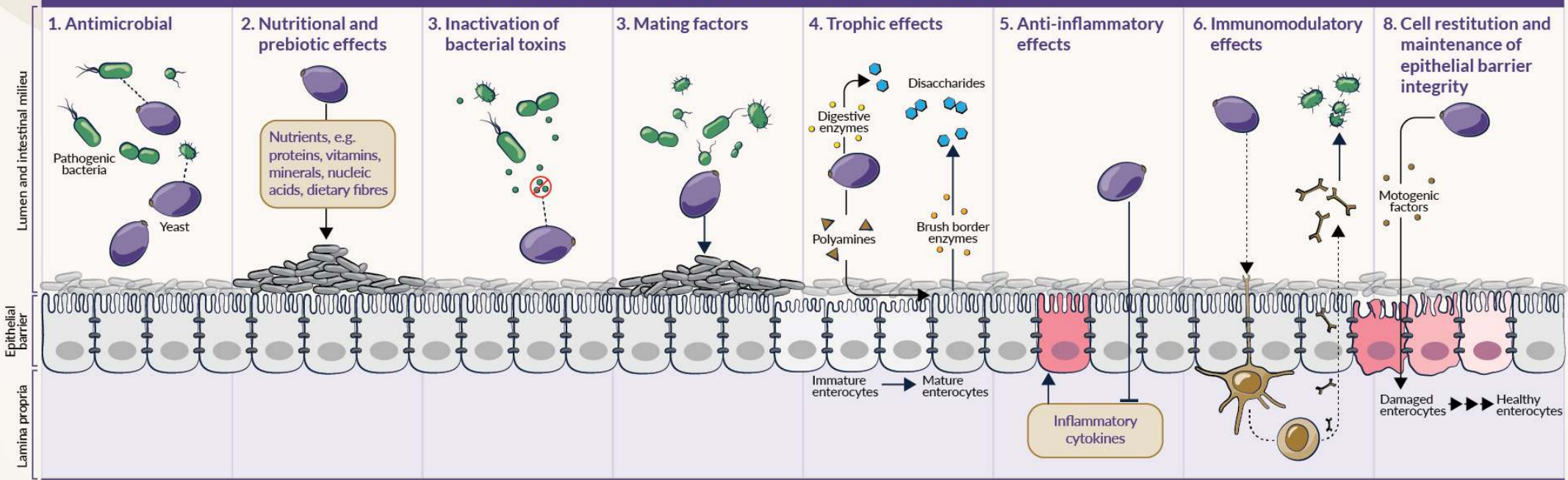
Similar to bacteria in the microbiome, yeasts can be generally classified into three categories: parasitic, opportunistic parasites and beneficial probiotics.



Saccharomyces boulardii (SB) vs *Saccharomyces cerevisiae* (SC)

	SB	SC
Optimal growth at 37°C	✔	
High acid resistance	✔	
Faster growth rate within intestinal tract		✔
Releases nutrients and compounds in small intestine		✔

THE FUNCTION OF YEASTS IN SCBIOTICS™



MECHANISM OF ACTION

Irreversible binding of pathogenic bacteria to the yeast surface.

Yeasts influence growth of gut microflora and the host via release of nutrients:

- proteins, dietary fibres, nucleic acids, vitamins, minerals, (K, P, Se Cr, Zn).
- biologically active form of chromium known as glucose tolerance factor.
- prebiotic β -glucans.

Yeasts can inactivate bacterial toxins, e.g.

- toxins A and B of *C. difficile*
- brush border membrane receptor of toxin A
- endotoxin (LPS) of *Escherichia coli* (partially).

Where pathogenic bacteria grow beyond normal levels, yeasts can communicate via mating factors which can modulate or attenuate the biomass growth.

During diarrhoeal episodes, intestinal epithelial cells can be damaged and replaced with immature cells which do not contain digestive enzymes. Yeasts secrete a number of different digestive enzymes that can function in the same way as brush border membrane enzymes in their absence.

Yeasts release compounds that modify epithelial cells and the mucosal immune system signalling pathways.

Yeasts enhance the effects of enzymes in the intestinal mucosa and through this improves the production of secretory IgA.

Yeasts accelerate enterocyte migration by secretion of motogenic factors that enhance cell restitution.