Mycotoxin Binder (β-Glucans

Immunity Booster (β-Glucans 1-3, 1-6)



Pathogen Agglutination

## A Potent Non-Antibiotic Growth Promoter

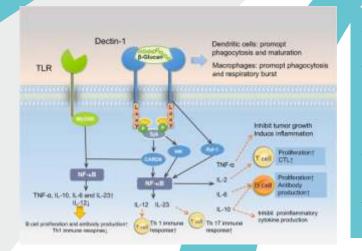
## Enriched in Mannan and $\beta$ (1-3, 1-6) glucan

## Stimulates Immunity naturally

CATALYS

**Beyond Innovations** 

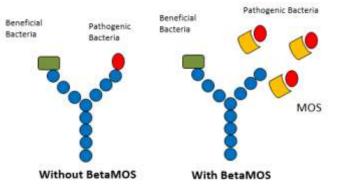
 $\beta$  - Glucans are naturally occurring polysaccharides with glucose as structural component, linked by  $\beta$  - Glycosidic bonds.  $\beta$  - Glucans are responsible for a multitude of actions which protect and enhance the immune system and provide optimum resistance to any possible health assailants due to its ability to bind directly with macrophages and other white blood cells (neutrophils and natural killer (NK) cells) and to activate them. Activate the functions of encapsulation, coagulation, melanisation, and phagocytosis associated with defense mechanism.



When  $\beta$  -glucan receptors are engaged by beta 1, 3/1, 6 glucans, all immune functions are improved, including phagocytosis, release of certain cytokines (intercellular hormones) IL-1, IL-6, GM-CSF, interferon, and the processing of antigens. These cytokines stimulate formation of new white blood cells (WBC) thus providing immunity to  $\beta$ -glucan binding receptors present in all vertebrates ranging from fish to human.

### Mannan - Oligosaccharides

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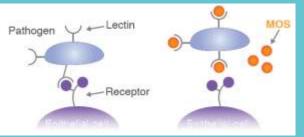
### Description

BetaMOS (beta glucans & MOS) is a natural component derived from Saccharomyces cerevisiae. The cell components were activated by autolysis and also the intracellular contents comes through the cell. BetaMOS is indigestible and it passes through the intestinal tract without being degraded, thus keeping the functional properties unaltered during the digestion cycle.

#### **MODE OF ACTION**

#### A. Block and excrete pathogens

The mannan of cell wall has similar structure with binding site of pathogens on the intestinal wall. Thus it can competitively bind the pathogens and interfere with the binding between pathogens and intestinal wall. Furthermore, as the mannan cannot be digested by pathogens and intestinal enzymes, the tightly bound pathogenmannan complex can be discharged from the body.



#### **B. Bind mycotoxins**



The special space structure of cell wall provides lots of binding sites for different toxins and the intermolecular forces like hydrogen bonds and Van der Waals forces can help to reinforce the binding and form polysaccharide-toxin complex, which prevents the mycotoxin being absorbed.

#### C. Stimulate immune system

 $\beta$ -glucan can bind to the surface receptor of immune cells, exciting the immune relate signal transmission channel, stimulate immune cells to release downstream signal molecule, and induce the specific and non-specific immune response.

#### **Benefits:**

- Helps to grow faster with improved FCR
- Improves digestion & metabolism of body functions
- Enhances resistance against infectious diseases by enhancing cellular defense mechanisms
- Prevents intestinal epithelial damage & enhances cell repair
- Reduces the mortality due to EMS
- Helps to increase the survival rate & improve resistance against White Spot Syndrome (WSS)
- Prevent the absorption of mycotoxins in the intestine

Free From Hormones & Antibiotics

Aquatic Feed Supplement

Keep Out of Reach of Children

Not For Medicinal Use

# Catalyst LifeSciences Pvt. Ltd.

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DISPOSAL OF BAD AND OUTER PACKAGE: Do not contaminate water, food or feed by storage and disposal. Completely empty container into application equipment. Triple rinse pail and offer for recycling or reconditioning. Containers can also be disposed of in a sanitary landfill or by incineration, or in accordance with guidance from your local waste regulation authority, such as by burning (if burned, stay out of smoke). When applying this product to water bodies, avoid solid particles from falling on nearby ground where birds and feed may be present.

### Recommended U<mark>sage Levels:</mark> Regular use

Fish: 5-10 gm / kg of feed Shrimp: 10-12 gm / kg of feed

#### Stress conditions

Fish: 10-13 gm/kg of feed Shrimp: 15-20 gm/kg of feed

#### **Presentation:** Milky White HDPE of 1 kg





