VET EXPERT
BASED ON EVIDENCE

BioProtect

LET'S TALK ABOUT MICROBIOME

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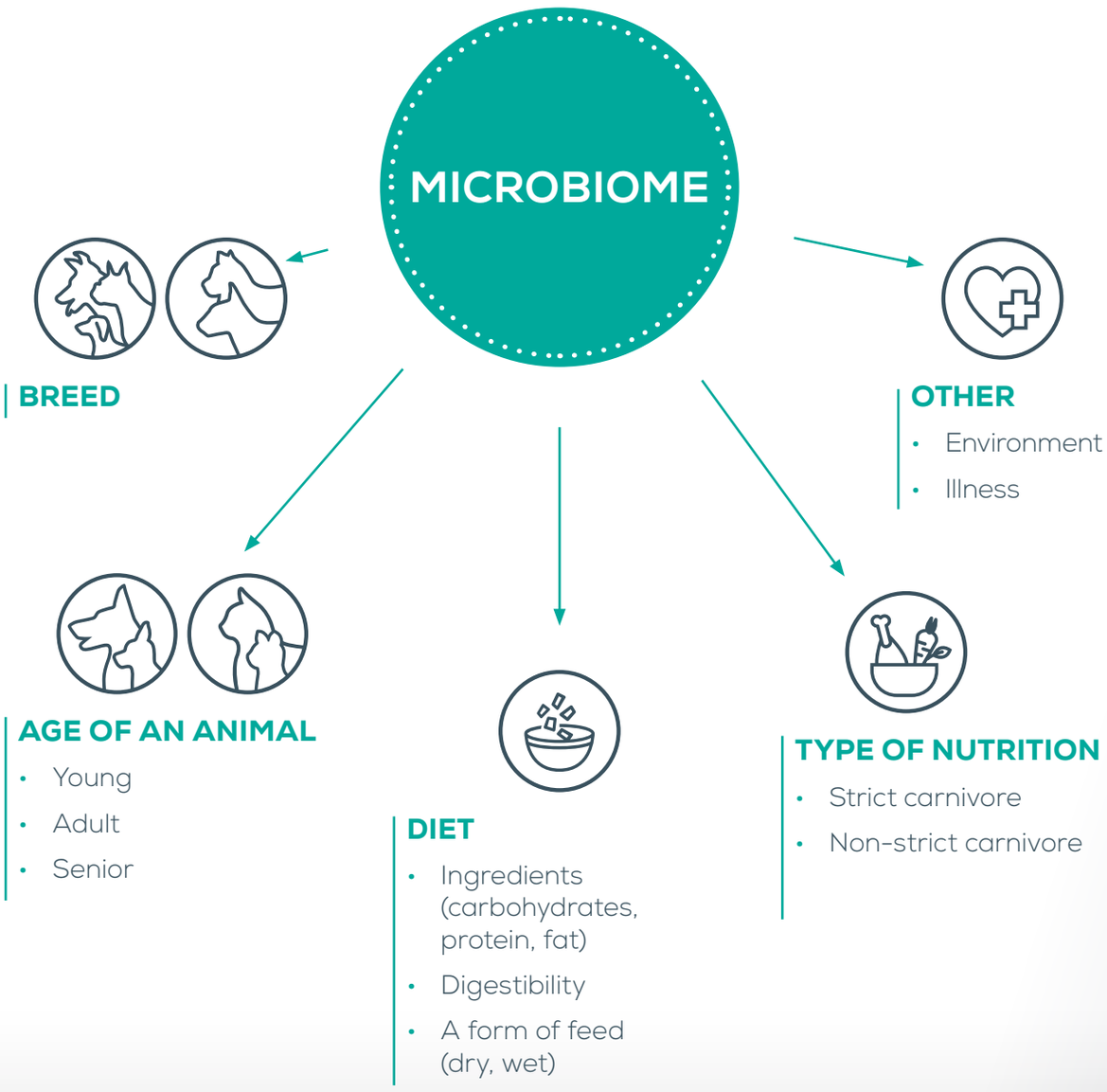
WHAT IS MICROBIOME?

The microbiome can be regarded as a specific microbial gene pool, which is unique for each individual. A shared living environment allows the sharing of bacterial genes.

The groups of bacteria that dominate the digestive tract of animals are *FIRMICUTES, BACTEROIDETES*, *ACTINOBACTERIA*, *FUSOBACTERIA*. Particular attention should be paid to *Streptococcus* and *Lactobacillus strains.*

WHAT INFLUENCES MICROBIOME?



PRE, PRO OR POST–BIOTICS? WHICH TO CHOOSE?

Probiotics – e.g. *Enterococcus faecium, Lactobacillus acidophilus* – live bacterial cultures with multidirectional influence on the host organism, mainly responsible for populating the gastrointestinal tract with normal microflora.

Prebiotics – FOS, MOS – non-digestible food components (usually dietary fiber fractions) that stimulate the development and / or activity of one or a limited number of probiotic bacteria strains in the large intestine and thus have a beneficial effect on the health of the body.

PROBIOTIC + PREBIOTIC = **SYNBIOTIC** maximizing the effects of probiotics

Postbiotics – metabolites of probiotic bacteria – eg SCFA- Short-chain fatty acids, mainly butyric, acetic and propionic acids. They show a number of beneficial activities for the body, such as anti-inflammatory effect, improvement of the intestinal barrier function, regulation of intestinal motility, additionally some postbiotics are a source of energy for colonocytes.

A LOT OF **PROBLEMS** – **ONE** SOLUTION

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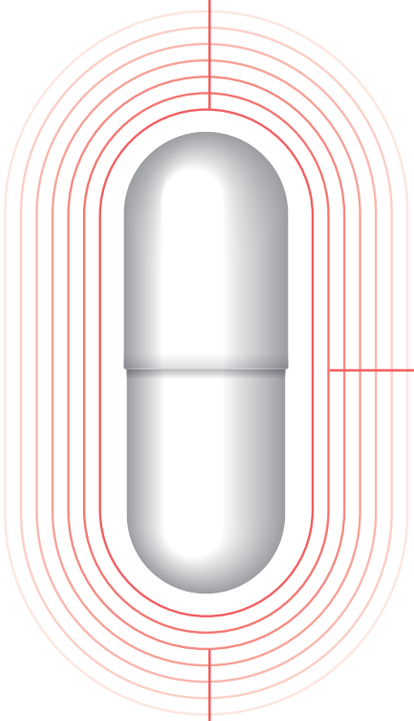
BIOPROTECT:
A LOT OF PROBLEMS – ONE SOLUTION

BioProtect is a synbiotic with ingredients showing multidirectional action, developed by Polish specialists as an optimal support for the animal's microbiome.

A unique combination of selected probiotic bacteria (*Enterococcus faecium, Lactobacillus acidophilus*) and prebiotics (fructooligosaccharides – FOS and mannanoligosaccharides – MOS), **with scientifically proven effects**, provides direct and indirect support for the correct intestinal microflora in the event of its disturbances of various backgrounds.

The multidirectional effect of BioProtect ingredients also includes the **stimulation of specific immunity** (within the intestines), and along with the correct diet, **optimization of the production of postbiotics**, metabolites with a wide, beneficial effect on dogs and cats organisms.

BIOPROTECT:
INGREDIENTS WITH MULTIDIRECTIONAL EFFECT



PROBIOTICS

Enterococcus faecium, Lactobacillus acidophilus
live cultures of bacteria specific for dogs and cats:

- universal for the microbiome of dogs and cats, regardless of the age of the animal
- directly and indirectly affect the optimization of the microflora residing in the digestive tract:
  - directly – as a result of preferential growth of beneficial bacteria and limiting the growth of pathogenic bacteria
  - indirectly – through interaction with intestinal epithelial cells and through the intestinal epithelial immune system[1]

PREBIOTICS

FOS – fructooligosaccharides:

- stimulate the growth of *Enterococcus faecium, Lactobacillus acidophilus bacteria*, involved in the production of postbiotics, eg. SCFA (short-chain fatty acids).
- affect the pH change in the intestinal lumen, and thus create unfavourable conditions for the growth of potentially pathogenic bacteria, including *Clostridium perfringens, Escherichia coli, Salmonella enterica*

PREBIOTICS

MOS – mannanoligosaccharides:

- act as a ligand to type-1 fimbria, which reduces the colonization of the intestinal cell membrane by pathogenic bacteria[2, 3]
- reduce the population of opportunistic pathogens *Clostridium perfringens* in dogs faeces[4]
- reduce the population of *Escherichia coli* and stimulate the growth of the *Lactobacillus sp.* and *Bifidobacterium sp.*[5, 6]
- stimulate the mechanisms of specific and non-specific immunity[7]

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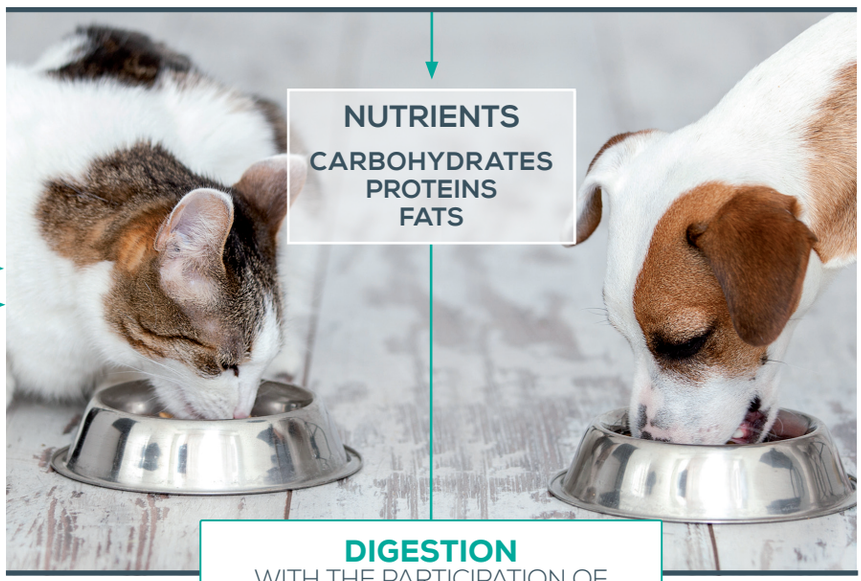
BIOPROTECT

BioProtect used with a properly balanced diet, provides the optimal amount of postbiotic substances with a wide, health-promoting effect on the body's cells.

BALANCED DIET +

HOST ORGANISM



NUTRIENTS
CARBOHYDRATES
PROTEINS
FATS

DIGESTION
WITH THE PARTICIPATION OF INTESTINAL BACTERIA

MONOSACCHARIDES
DISACCHARIDES
AMINO ACIDS
FATTY ACIDS

MICROBIOLOGICAL FERMENTATION OF CARBOHYDRATES AND PROTEINS

POSTBIOTICS
ABSORBED BY THE HOST ORGANISM

ABSORBTION BY HOST ORGANISM

Pro-health effect on the body's cells, e.g. nutrition and regeneration of the intestinal epithelium => improved tightness of cell membranes	Inhibition of the growth of potentially pathogenic bacteria, including *Clostridium perfringens, Escherichia coli, Salmonella enterica.*	Regulation of glucose and insulin secretion from the pancreas.

BIOPROTECT – USE

- as a prophylaxis and support for the development of a normal intestinal flora
- in diarrhoea, after deworming
- in diseases of the gastrointestinal tract, bacterial, parasitic background, eg. giardiasis, candidiasis
- during antibiotic therapy
- in constipation, flatulence
- in diseases of the digestive tract, e.g. enteropathies, SIBO (dysbiosis), IBD
- to support the stimulation of the mechanisms of specific and non-specific immunity
- to optimize the production of postbiotics (in combination with a properly balanced diet) – substances that have a number of beneficial effects for the host organism

WHY BIOPROTECT

- contains bacteria specific and universal for the microbiome of the canine and feline population
- one proven and effective preparation for many problems
- allows for the synthesis of an optimal amount of postbiotics
- provides additional support for specific and non-specific immunity
- synbiotic appreciated by veterinarians all over Poland - No. 1 in recommendations *
- provides comprehensive solutions together with other complementary Vet Expert products (Giardia Ag test, Vet Expert diets)
- effective support in antibiotic therapy – FOS and MOS - action independent of the administration of an antibiotic

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VET EXPERT COMPREHENSIVE SOLUTION TO DIARRHOEAS

Diagnose the most common cause of parasitic diarrhoea!

Giardia Ag

Rapid IC test detects the antigen of ***Giardia intestinalis*** in faeces

- easy to make
- reliable result in 10 minutes!
- scientifically proven quality

BioProtect

- contains substances that inhibit the growth of pathogenic bacteria and restore the microflora of the gastrointestinal tract
- contains bacterial strains helpful in parasitic invasions of the gastrointestinal tract [8]

VET EXPERT OPTIMIZING THE PRODUCTION OF PROBIOTICS

The simultaneous use of BioProtect and the Vet Expert diet (e.g. Intestinal and Intestinal Elimination) provides the optimal amount of postbiotic substances with a wide, pro-health effect on the body's cells.

Have you diagnosed a parasitic or protozoan infestation?

Remember that the use of a synbiotic increases the effectiveness of the therapy and speeds up recovery.[8]

Literature:

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* Based on a survey among veterinarians in Poland, conducted by Kantar Polska S.A., in March 2021, concerning veterinary supplements (complementary compound feeds) for dogs or cats.

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