

Innovations to make everyday life better,  
healthier and liveable.

TO CREATE FUNCTIONAL BREAD &  
EXERCISE-SPORTS ORIENTED BAKED  
GOODS READY-MADE FORMULA.

ND Pharma & Biotech

Introducing

PANHEALTH™



BIOTECHNOLOGY FOR LIFE

FUNCTIONAL BREAD WITH EXCEPTIONAL NUTRITIONAL PROPERTIES  
AND UNRIVALLED TASTE AND DIGESTION-COMFORT\*

\*Subject also to Flour Mixtures Used

ND Pharma & Biotech

Innovation that Inspires...

[www.ndpharmabiotech.com](http://www.ndpharmabiotech.com)

## INTRODUCTION

### Nutrigenomics and Health

As scientific and technological advances develop in the field of health and nutrition, more focus has been directed toward the emerging field of *nutrigenomics*, or “personalized nutrition.”

The science of *nutrigenomics* involves the application of the human genome to nutrition and personal health to provide individual dietary recommendations.

By using an individual’s unique genetic makeup and nutritional requirements to tailor recommendations, consumers may one day have a greater ability to reduce their risk of disease and optimize their health.

Personalizing nutrition to an individual’s unique genetic makeup has the potential for positive health outcomes overall.

Choosing an individualized approach, over a more traditional or general approach, to health and nutrition recommendations can provide consumers with the most appropriate and beneficial information for their specific nutritional needs. While personalized nutrition seems promising, research is still in the preliminary stages, and years may pass before accurate and effective recommendations can be made for individuals.

Functional foods/foods for health are an important part of an overall healthful lifestyle that includes a balanced diet and physical activity.

The best advice is to include a variety of foods and supplements, as recommended by Health Authorities.

**PANHEALTH™** is composed by a series of formulas which would provide many potentially beneficial components to the regular manufactured foodstuffs, improving their characteristics, quality, functionality and making those, healthier.

So, if you’re a manufacturer or an operator with interest within the industry, please take a look to our brochure and please contact to discuss the adapted formula/s to your pretended product, terms, conditions of service and we will counsel you with the best of our knowledge about the best choice and options for you, according to your intentions and interests.

### Contact Us:

info@ndpharmabiotech.com

Ref: PANHEALTH™

# Functional Ingredients /Components for Foodstuffs\*

\*Able to be used as part of PANHEALTH™ Customized Formulas

Class/Components	Source*	Potential Benefit
<b>CAROTENOIDS</b>		
<b>Beta-carotene</b>	carrots, pumpkin, sweet potatoes, cantaloupe, spinach, tomatoes	neutralizes free radicals which may damage cells; bolsters cellular antioxidant defenses; can be made in vitamin A in the body
<b>Lutein, Zeaxanthin</b>	kale, collards, spinach, corn, eggs, citrus fruits, asparagus, carrots, broccoli	supports maintenance of eye health
<b>Lycopene</b>	tomatoes and processed tomato products, watermelon, red/pink grapefruit	supports maintenance of prostate health
<b>DIETARY (functional and total) FIBER</b>		
<b>Insoluble fiber</b>	wheat bran, corn bran, fruit skins	supports maintenance of digestive health; may reduce the risk of some types of cancer
<b>Beta glucan**</b>	oat bran, oatmeal, oat flour, barley, rye	may reduce risk of coronary heart disease (CHD)
<b>Soluble fiber**</b>	psyllium seed husk, peas, beans, apples, citrus fruits	may reduce risk of CHD and some types of cancer
<b>Whole grains**</b>	cereal grains, whole wheat bread, oatmeal, brown rice	may reduce risk of CHD and some types of cancer supports maintenance of healthy blood glucose levels

\*Examples are not an all-inclusive list

\*\*FDA-approved health claim for component

# Functional Ingredients /Components for Foodstuffs\*

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Class/Components	Source*	Potential Benefit
<b>FATTY ACIDS</b>		
<b>Monounsaturated fatty acids (MUFAs)**</b>	tree nuts, olive oil, canola oil	may reduce risk of CHD
<b>Polyunsaturated fatty acids (PUFAs) – Omega-3 fatty acids— ALA</b>	walnuts, flaxseeds, flaxseed oil	supports maintenance of heart and eye health; supports maintenance of mental function
<b>PUFAs – Omega-3 fatty acids— DHA/EPA**</b>	salmon, tuna, marine and other fish oils	may reduce risk of CHD; supports maintenance of eye health and mental function
<b>Conjugated linoleic acid (CLA)</b>	beef and lamb; some cheese	supports maintenance of desirable body composition and immune health
<b>FLAVONOIDS</b>		
<b>Anthocyanins – Cyanidin, Pelargonidin, Delphinidin, Malvidin</b>	berries, cherries, red grapes	bolster cellular antioxidant defenses; supports maintenance of healthy brain function
<b>Flavanols – Catechins, Epicatechins, Epigallocatechin</b>	tea, cocoa, chocolate, apples, grapes	supports maintenance of heart health
<b>Procyanidins and Proanthocyanidins</b>	cranberries, cocoa, apples, strawberries, grapes, red wine, peanuts, cinnamon, tea, chocolate	supports maintenance of urinary tract health and heart health
<b>Flavanones – Hesperetin, Naringenin</b>	citrus fruits	neutralizes free radicals which may damage cells; bolster cellular antioxidant defenses
<b>Flavonols – Quercetin, Kaempferol, Isorhamnetin, Myricetin</b>	onions, apples, tea, broccoli	neutralizes free radicals which may damage cells; bolster cellular antioxidant defenses

\*Examples are not an all-inclusive list

\*\*FDA-approved health claim for component

# Functional Ingredients /Components for Foodstuffs\*

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Class/Components	Source*	Potential Benefit
<b>ISOTHIOCYANATES</b>		
<b>Sulforaphane</b>	cauliflower, broccoli, broccoli sprouts, cabbage, kale, horseradish	may enhance detoxification of undesirable compounds; bolsters cellular antioxidant defenses
<b>MINERALS</b>		
<b>Calcium**</b>	sardines, spinach, yogurt, low-fat dairy products, fortified foods and beverages	may reduce the risk of osteoporosis
<b>Magnesium</b>	spinach, pumpkin seeds, whole grain breads and cereals, halibut, almonds, brazil nuts, beans	supports maintenance of normal muscle and nerve function, immune health and bone health
<b>Potassium**</b>	potatoes, low-fat dairy products, whole grain breads and cereals, citrus juices, beans, banana, leafy greens	may reduce the risk of high blood pressure and stroke, in combination with a low sodium diet
<b>Selenium</b>	fish, red meat, whole grains, garlic, liver, eggs	neutralizes free radicals which may damage cells; supports maintenance of immune and prostate health
<b>PHENOLIC ACIDS</b>		
<b>Caffeic acid, Ferulic acid</b>	apples, pears, citrus fruits, some vegetables, whole grains, coffee	bolsters cellular antioxidant defenses; supports maintenance of eye and heart health
<b>PLANT STANOLS/STEROLS</b>		
<b>Free Stanols/Sterols**</b>	corn, soy, wheat, fortified foods and beverages	may reduce risk of CHD
<b>Stanol/Sterol esters**</b>	stanol ester dietary supplements, fortified foods and beverages, including table spreads	may reduce risk of CHD

\*Examples are not an all-inclusive list

\*\*FDA-approved health claim for component

# Functional Ingredients /Components for Foodstuffs\*

\*Able to be used as part of PANHEALTH™ Customized Formulas

Class/Components	Source*	Potential Benefit
<b>POLYOLS</b>		
<b>Sugar alcohols** – Xylitol, Sorbitol, Mannitol, Lactitol</b>	some chewing gums and other food applications	may reduce risk of dental caries
<b>PREBIOTICS</b>		
<b>Inulin, Fructo-oligosaccharides (FOS), Polydextrose</b>	whole grains, onions, some fruits, garlic, honey, leeks, banana, fortified foods and beverages	supports maintenance of digestive health; supports calcium absorption
<b>PROBIOTICS</b>		
<b>Yeast, Lactobacilli, Bifidobacteria and other specific strains of beneficial bacteria</b>	certain yogurts and other cultured dairy and non-dairy applications	supports maintenance of digestive and immune health; benefits are strain-specific
<b>PHYTOESTROGENS</b>		
<b>Isoflavones – Daidzein, Genistein</b>	soybeans and soy-based foods	supports maintenance of bone and immune health, and healthy brain function; for women, supports menopausal health
<b>Lignans</b>	flax seeds, rye, some vegetables, seeds and nuts, lentils, triticale, broccoli, cauliflower, carrot	support maintenance of heart and immune health
<b>SOY PROTEIN</b>		
<b>Soy Protein**</b>	soybeans and soy-based foods like milk, yogurt, cheese and tofu	may reduce risk of CHD

\*Examples are not an all-inclusive list

\*\*FDA-approved health claim for component

**ND Pharma & Biotech**  
Food & Nutrition Division

Our Company, based and relying upon the Scientific community research and advances, is increasing its understanding about the potential for new formulas and ingredients to create the best-in-class functional foods and their role in maintaining and optimizing health.

Potential benefits has to be validated and after that processes claims are allowed to be made, so a strong and reliable body of credible scientific research is needed to confirm the benefits of any particular food or component.

ND Pharma & biotech co. is at the cutting edge of research and innovation in the field of ingredients for functional foods in order to deliver the best products to our clients to let them make available to customers better and healthier functional foods and reaching their potential public health benefits to consumer.

To accomplish that task, clients must be able to rely on the scientific criteria that are going to use within their own products and manufactures to document such health statements and claims.

This is what we work as we actually do.

To MAKE **LIFE** BETTER.





### **Regulation Bodies and Health Claims** Not All is Allowed

EFSA within the EU and the FDA for the US, are the regulating bodies that govern and approved food products according to their intended use and the nature of claims made on the package.

Five types of health-related statements or claims are allowed on food and dietary supplement labels:

1. **Nutrient content claims** indicate the presence of a specific nutrient at a certain level.
2. **Structure and function claims** describe the effect of dietary components on the normal structure or function of the body.
3. **Dietary guidance claims** describe the health benefits of broad categories of foods or diets and do not refer to a disease or a health related condition.
4. **Qualified health claims** convey a developing relationship between components in the diet and reduced risk of disease, as reviewed by the FDA and supported by the weight of credible scientific evidence available.
5. **Health claims** confirm a relationship between components in the diet and/or supplements, and reduced risk of disease or health condition, as approved by EFSA/FDA and supported by significant scientific agreement, materials and research data.

# Functional Ingredients /Components for Foodstuffs\*

\*Able to be used as part of PANHEALTH™ Customized Formulas

Class/Components	Source*	Potential Benefit
<b>POLYOLS</b>		
<b>Sugar alcohols** – Xylitol, Sorbitol, Mannitol, Lactitol</b>	some chewing gums and other food applications	may reduce risk of dental caries
<b>PREBIOTICS</b>		
<b>Inulin, Fructo-oligosaccharides (FOS), Polydextrose</b>	whole grains, onions, some fruits, garlic, honey, leeks, banana, fortified foods and beverages	supports maintenance of digestive health; supports calcium absorption
<b>PROBIOTICS</b>		
<b>Yeast, Lactobacilli, Bifidobacteria and other specific strains of beneficial bacteria</b>	certain yogurts and other cultured dairy and non-dairy applications	supports maintenance of digestive and immune health; benefits are strain-specific
<b>PHYTOESTROGENS</b>		
<b>Isoflavones – Daidzein, Genistein</b>	soybeans and soy-based foods	supports maintenance of bone and immune health, and healthy brain function; for women, supports menopausal health
<b>Lignans</b>	flax seeds, rye, some vegetables, seeds and nuts, lentils, triticale, broccoli, cauliflower, carrot	support maintenance of heart and immune health
<b>SOY PROTEIN</b>		
<b>Soy Protein**</b>	soybeans and soy-based foods like milk, yogurt, cheese and tofu	may reduce risk of CHD

\*Examples are not an all-inclusive list

\*\*FDA-approved health claim for component

# Functional Ingredients /Components for Foodstuffs\*

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Class/Components	Source*	Potential Benefit
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## SULFIDES/THIOLS

<b>Diallyl sulfide, Allyl methyl trisulfide</b>	garlic, onions, leeks, scallions	may enhance detoxification of undesirable compounds; supports maintenance of heart, immune and digestive health
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<b>Dithiolthiones</b>	cruciferous vegetables	may enhance detoxification of undesirable compounds; supports maintenance of healthy immune function
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## VITAMINS

<b>A***</b>	organ meats, milk, eggs, carrots, sweet potato, spinach	supports maintenance of eye, immune and bone health; contributes to cell integrity
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<b>Thiamin (Vitamin B1)</b>	lentils, peas, brown or enriched white rice, pistachios and certain fortified breakfast cereals	supports maintenance of mental function; helps regulate metabolism
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<b>Riboflavin (Vitamin B2)</b>	lean meats, eggs, green leafy vegetables, dairy products and certain fortified breakfast cereals	supports cell growth; helps regulate metabolism
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<b>Niacin (Vitamin B3)</b>	dairy products, poultry, fish, nuts, eggs and certain fortified breakfast cereals	supports cell growth; helps regulate metabolism
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<b>Pantothenic acid (Vitamin B5)</b>	sweet potato, organ meats, lobster, soybeans, lentils and certain fortified breakfast cereals	helps regulate metabolism and hormone synthesis
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\*Examples are not an all-inclusive list

\*\*FDA-approved health claim for component

\*\*\*Preformed vitamin A is found in foods that come from animals. Provitamin A carotenoids are found in many darkly colored fruits and vegetables and are a major source of vitamin A for vegetarians.

# Functional Ingredients /Components for Foodstuffs\*

\*Able to be used as part of PANHEALTH™ Customized Formulas

Class/Components	Source*	Potential Benefit
<b>VITAMINS (continued)</b>		
<b>Pyridoxine (Vitamin B6)</b>	beans, nuts, legumes, fish, meat, whole grains and certain fortified breakfast cereals	supports maintenance of immune health; helps regulate metabolism
<b>Folate or folic acid (Vitamin B9)**</b>	beans, legumes, citrus fruits, green leafy vegetables and fortified breads, cereals, pasta, rice	may reduce a woman's risk of having a child with a brain or spinal cord defect; supports maintenance of immune health
<b>B12 (Cobalamin)</b>	eggs, meat, poultry, milk and certain fortified breakfast cereals	supports maintenance of mental function; helps regulate metabolism and supports blood cell formation
<b>Biotin</b>	liver, salmon, dairy, eggs, oysters and certain fortified breakfast cereals	helps regulate metabolism and hormone synthesis
<b>C</b>	guava, sweet red/green pepper, kiwi, citrus fruit, strawberries, fortified foods and beverages	neutralizes free radicals which may damage cells; supports maintenance of bone and immune health
<b>D**</b>	sunlight, fish, fortified foods such as yogurts or cereals, and beverages, including milk and juices	may reduce the risk of osteoporosis; helps regulate calcium and phosphorus; supports immune health; helps support cell growth
<b>E</b>	sunflower seeds, almonds, hazelnuts, turnip greens, fortified foods and beverages	neutralizes free radicals, which may damage cells; supports maintenance of immune and heart health

\*Examples are not an all-inclusive list

\*\*FDA-approved health claim for component

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Consumer interests in the evolving knowledge related to the close relationship between diet and health has increased the demand for information about functional foods and functional food products. Among factors triggering such interest of consumers regarding such foods we may include the rapid advances in science and technology, research and development, the increasing healthcare costs, the changes in food laws affecting label and product claims, an aging population and an increased rising interest in attaining wellness through diet, among others.

We work side by side with producers, manufacturers and all operators involved to develop and release the top quality ingredients that you need to make FUNCTIONAL and SUPER Products.

So please, let us know about your project and ask Us:

[info@ndpharmabiotech.com](mailto:info@ndpharmabiotech.com)



# PANHEALTH™

## BREAD & BAKED GOODS

[www.ndpharmabiotech.com](http://www.ndpharmabiotech.com)