

# 3<sup>rd</sup> International Conference and Exhibition on Probiotics, Functional & Baby Foods

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## Research and development new synbiotic product and its clinical effect

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**Introduction:** Currently, the functional food is recognized as an alternative to pharmacotherapy. The objective of research is a synbiotic product “NAR”, which includes probiotics and prebiotics. Probiotics are presented by cultures of *Lactobacillus plantarum*, *Lactobacillus fermentum*, *Lactobacillus acidophilus*, *Bifidobacterium longum*, *Bifidobacterium bifidum*. The product is also enriched with fish collagen. The goal of this work is to investigate the clinical efficacy of a new synbiotic.

**Method:** Double-blind, randomised, placebo-controlled trial, including 180 adult (age 30-89) with symptoms of metabolic syndrome who were allocated to placebo or synbiotic group. We enrolled 90 adult in placebo group and 90 in synbiotic group. The two groups were similar for demographic and clinical characteristics. All patients signed a consent letter. The main criteria for inclusion were: Blood pressure: 130/90 mmHg; Raised fasting plasma glucose (FPG): >100 mg/dL (5.6 mmol/L), or previously diagnosed type 2 diabetes; Dyslipidemia: triglycerides (TG): =1.695 mmol/L and high-density lipoprotein cholesterol (HDL-C) =0.9 mmol/L (male), =1.0 mmol/L (female); Central obesity: waist:hip ratio >0.90 (male); >0.85 (female), or body mass index >30 kg/m<sup>2</sup>. All patients underwent clinical and laboratory evaluation, including complete blood tests, glucose test, glycosylated hemoglobin, total cholesterol + triglycerides, cholesterol, LDL, HDL plasma, immunogram, co-program. All patients were interviewed, the questionnaire included 200 questions related to diet, lifestyle and health. Synbiotic were used by patients in dose of 200 grams twice a day. The duration of applying the synbiotic were 90 days.

**Results:** In the study group the percentage of colds were significantly lower than in placebo group, the majority of patients reported an improvement in abdominal discomfort, reduction in serum total cholesterol and low-density lipoprotein, weight loss of 8-9 percent in different age groups, stabilized frequency and consistency of stool (judging by the Bristol scale).

**Conclusion:** As a result was exhibited the efficacy of a new synbiotic in adult with metabolic syndrome.

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