## **Food Science and Nutraceuticals** February 08-09, 2024 | Paris, France

Volume: 15

## ABB C1 for trained immunity: enhancing vaccine efficacy and protecting from infection

## Maria Tintoré

AB Biotek Human Nutrition & Health, Spain

**Statement of the Problem:** Training has been an accepted part of our lives for a long time. One area of training that often gets overlooked is training the immune system. We have now shown that it is possible to train the immune system to make it react faster and more efficiently. This presentation will discuss the latest research conducted with ABB C1, a yeast-based postbiotic for training the immune system. ABB C1 is composed by a  $\beta$ -glucan complex and by two postbiotic Saccharomyces cerevisiae rich in selenium and zinc.

**Methodology & Theoretical Orientation:** In vitro, in vivo, and human clinical trials have been done to assess ABB C1's effects on trained immunity, protection of the gut barrier function and enhancement of vaccination efficacy. The in vitro study focused on the assessment of TEER in the absence or presence of ABB C1 as a measurement of the gut barrier function. In vivo studies assessed the capacity of ABB C1 to stimulate phagocytosis of peripheral blood monocytes, leukocytes, and peritoneal macrophages of mice in comparison with a negative control and two positive controls of known beta-glucans (n = 10 mice/group). The randomized and placebo-controlled clinical study enrolled 70 patients receiving the influenza or the Covid-19 vaccines in combination with a 30 days supplementation with ABB C1 or placebo. Immune response to vaccination was assessed, together with clinical status and ABB C1 safety and tolerance. Findings: ABB C1 showed an increase in TEER after 3 weeks of spontaneous build-up of the monolayer, together with a protection from epithelium disruption upon a challenge with E. coli. ABB C1 significantly stimulated phagocytosis in comparison to the control group and showed a superior effect compared with the positive controls. ABB C1 was found to be safe in a human clinical study, and it improved the immune response to both influenza and Covid-19 vaccines, the circulating levels of selenium and zinc and accelerated the production of antibodies in response to vaccination.

**Conclusion & Significance:** all these findings support the beneficial effects of ABB c1 for training the immune system. Supplementation with ABB C1 is natural and safe and could represent a good strategy to protect vulnerable populations to infection and to increase vaccination efficacy.

## **Biography**

Maria Tintoré is a Pharmacist by training, and obtained and PhD in Biotechnology. She has 6 years of experience in basic R&D and 8 years of experience in Product Development within the Pharma and Nutraceutical Industry, with outstanding expertise in solutions for microbiome modulation. She has worked in pre-clinical and clinical development of nutraceuticals, specializing in biotics, including probiotics, postbiotics and enzymebiotics. She is passionate for Innovation and enjoys presenting new innovative concepts to the scientific and medical communities.

01