

## Era of Covid-19: The Significance of Lipid Functional Foods, Nutraceuticals in Keeping up Immunity

Ram Chandra Reddy Jala\*

Centre for Lipid Science & Technology CSIR-Indian Institute of Chemical Technology Uppal Road, Tarnaka, Hyderabad – 500 007, India

**\*Corresponding Author:** Ram Chandra Reddy Jala, Centre for Lipid Science & Technology CSIR-Indian Institute of Chemical Technology Uppal Road, Tarnaka, Hyderabad – 500 007, India.

CSIR-IICT Communication No: IICT/Pubs./2021/328

**Received:** October 04, 2021; **Published:** November 03, 2021

Dear Editor-in-Chief,

As you know, in the era of covid-19, keeping up the immunity becomes paramount so as to safeguarding ourselves from severe infections. As a lipid technologist, I would like to emphasize the significance of lipid functional foods, nutraceuticals in countering serious illness from coronavirus infection. Though inoculation provides greater protection from severe covid ill health, it is imperative to develop natural immunity. Nutraceuticals, functional food ingredients, and dietary supplements are paramount for health promotion and disease risk reduction. Functional foods are products that resemble conventional foods yet possess demonstrated physiological benefits [1]. Nevertheless, nutraceuticals, also called natural health products, are commodities derived from foods but are used in the medicinal form of pills, capsules, or liquids and again provide established physiological benefits, which in turn, promote health. This class includes both nutraceuticals and herbal as well as other natural products. However, lately, globally, functional foods and nutraceuticals are used interchangeably.

Despite all that, the main focus of such products is to improve health and reduce disease risk through prevention. What makes this category distinctive from pharmaceuticals is that they are multi-targeted mixtures and present at low concentrations while pharmaceuticals are uni-targeted pure compounds with high dose use. Soybean and Ricebran lecithins [2] besides egg yolk are rich sources of phosphatidylcholine, phosphatidylethanolamine, phosphatidylserine, which play their role in keeping up immunity in a natural way.

Yellow egg yolk, brown rice are natural sources of phospholipids. While lecithin is produced, as a by-product, during the refining of vegetable oils, brown rice is semi-polished rice produced during milling. It is established that soy phospholipid mixtures of natural composition can reduce elevated blood lipids namely, cholesterol, triglycerides while soy phosphatidylcholine is known for liver detoxification and repair of damaged liver tissue, on the other hand, phosphatidylserine, of soybean and brain and other sources, improve cognitive functions, and egg phospholipids reported for infant formula to improve visual acuity [3]. These aforementioned functions of phospholipids are emblematic of their wide range of nutritional and even preventive if not therapeutic activities.

The nutraceutical phospholipids are indisputably tolerated and pose no toxic threat, consistent with their orthomolecular status [4]. Omega-3 polyunsaturated fatty acids (PUFA) represents a class of fatty acids containing double bond at the omega-3 position, including alfa-linolenic acid, eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA). Prevention of cardiovascular disease, reducing symptoms of rheumatoid arthritis, improve the treatment of depression and schizophrenia are some of the many recognized health benefits from the intake of EPA and DHA. DHA is also vital in the development of the brain and vision in fetuses and infants, moderate maternal intake of omega-3 fats from the seafood will have a significant positive impact on the fine motor control of children. Fortification of food with microencapsulated fish oil is the best way of increasing omega-3 LCPUFA intakes [5]. Lipid structure

**Citation:** Ram Chandra Reddy Jala. (2021). Era of Covid-19: The Significance of Lipid Functional Foods, Nutraceuticals in Keeping up Immunity. *Archives of Nutrition and Public Health* 3(2).

is a critical factor for the rate of digestion and absorption and may consequently affect the bioavailability of omega-3 LCPUFA; however, certainly more studies are required to get a crystal-clear idea in terms of the quotient of bioavailability and digestion. Rice bran oil is unique among edible oil on account of its rich source of commercially and nutritionally crucial phytochemicals namely, oryzanol, lecithin, tocopherols, and tocotrienols [6]. Keeping the aforementioned facts in view, Lipid Nutraceuticals, functional foods certainly will have a positive impact on various physiological functions of the human body during this covid-19 era, in turn, help body fight against severe covid infections, if need be.

### Further Reading

1. Shahidi, F. (2012). Nutraceuticals, Functional Foods and Dietary Supplements in Health and Disease, Journal of Food and Drug Analysis, Vol. 20, Suppl. 1, Pages 226-230.
2. Polar Lipids: Biology, Chemistry, and Technology; Edited by Moghis U. Ahmad and Xuebing Xu, AOCS Press, Urbana, Illinois, (2015).
3. Phospholipids for functional food, Michael Schneider, Eur. J. Lipid Sci. Technol. 103 (2001) 98-101.
4. Phospholipids: Versatile Nutraceuticals for Functional Foods, Functional Foods and Nutraceuticals, December 2, Parris M. Kidd, PhD, For more, in-depth information on phospholipids, go to [www.phospholipidsonline.com](http://www.phospholipidsonline.com)
5. Bioavailability of omega-3 long chain polyunsaturated fatty acids from foods. Huiling Mu, AgroFOOD industry hi-tech, July/August 2008, vol 19 n4, Focus on Omega -3.
6. Gamma-oryzanol from rice bran oil – a review, M. Patel and S. N. Naik, Journal of Scientific and Industrial Research, vol 63, July (2004) pp 569-578.

#### Benefits of Publishing with EScientific Publishers:

- ❖ Swift Peer Review
- ❖ Freely accessible online immediately upon publication
- ❖ Global archiving of articles
- ❖ Authors Retain Copyrights
- ❖ Visibility through different online platforms

#### Submit your Paper at:

<https://escientificpublishers.com/submission>