

**Welcome Address of Mr. D. H. Pai Panandiker, Chairman, ILSI-India
At the National Conference on Processed Foods and Beverages for Health:
Beyond Basic Nutrition, April 29, 2011, Hotel Claridges, Suraj Kund**

It is a pleasure for me to welcome you to this Conference on Processed Foods and Beverages: Beyond Basic Nutrition organized by ILSI-India in association with the Ministry of Food Processing Industries, Government of India; Department of Biotechnology, Ministry of Science and Technology, Government of India; National Institute of Nutrition; National Horticulture Board, Planning Commission, Government of India; ILSI-Europe; ILSI-Japan and ILSI South East Asia Region.

I am particularly grateful to Dr V. Prakash for agreeing to deliver the keynote address. He is an eminent scientist with more than 190 papers, 4 books and a number of awards to his credit. Until a month back he was the director of CFTRI which is one of the premier institutions in nutrition science which has done considerable work on functional foods and nutraceutical.

A word about ILSI which is an acronym for International Life Sciences Institute. With HQ in Washington DC, ILSI is a worldwide organization with 15 regional branches. It fosters collaboration among experts from Academia, Government and Industry with focus on nutrition, food safety, risk assessment, biotechnology and environment in association with its Research Foundation and Health and Environment Sciences Institute. ILSI works closely with FAO and WHO.

The title of the Conference is about foods that go beyond basic nutrition or what are commonly called functional foods. The concept of functional foods is well understood although it is not precisely defined either in national food laws or in the Codex. The concept was first outlined by Japan for foods for specified health uses or FOSHU for short. That was in 1991.

'Beyond basic nutrition was the criteria evolved by IFIC for functional foods. In addition to nutrients, food contains bioactive ingredients which help enhance health or reduce risk of disease which make foods functional.

Functional foods are not new to Eastern countries, particularly India and China. They have been part of culture and therapeutics. Foods were used as medicines for a variety of diseases as also for their enhanced health effects.

Public interest in functional foods has in recent years increased considerably because of the growing health consciousness, new knowledge about bioactive ingredients in foods, and increased incidence of non-communicable diseases due to urbanization.

Functional foods can be natural foods or processed foods. Natural functional foods are mainly fruits and vegetables which are loaded with antioxidants, phytochemicals and physiologically active components that have a beneficial effect. Processed functional foods are foods modified for bioactive ingredients.

Tomato, broccoli, mushrooms, reduce cancer risk; garlic, oats, reduce risk of cardiovascular diseases; blackberries, cocoa, tea, nuts are excellent antioxidants and slow down aging; strawberries strengthen the immune system, and so on.

Processed foods with functional qualities have attracted a lot more attention. That is because with the new researches it has been possible to identify the ingredients in foods that make foods functional. Foods fortified with omega-3 fatty acid, spreads that contain plant sterols, foods enriched with folic acid, probiotics, enhance health effects of foods. Plant sterols, for instance, can reduce LDL by 6-15%. So also oats. Fortified milk improves bone mineral status and lowers risk of osteoporosis.

Processed functional foods enhance, add, remove or replace one or more of the components in foods with special qualities, by enzymatic, chemical or technological means or increase the bioavailability of these components.

Broadly, functional foods, whether natural or processed promote better physical and mental health, reduce risk of diseases like cancer, CVD, diabetes, etc, enhance immunity and slow down aging. No wonder the public has been taking interest in functional foods to avail of their health benefit and reduce risk of disease. Presently the market in India for functional foods is estimated at over Rs.600 billion or \$13 billion. What is surprising it is growing at the rate of nearly 33% per year.

The identification of biochemical ingredients that make foods functional has enabled isolation of these biochemicals from food. Lycopene in tomatoes, allicin in garlic, a variety of antioxidants that neutralize free radicals came to be separated from foods to manufacture nutraceutical. That has blurred the difference between foods and medicines.

When foods are processed and have functional qualities there are bound to be claims by industry to create market for the product. Undoubtedly, claims should have scientific basis and must be substantiated by systematic review of the evidence.

There are several guidelines developed by different countries. USA, Canada, Australia, and the UK provide detailed guidelines on the nature of scientific evidence generated from research with suggestions about its evaluation. In Europe, "Process for the Assessment of Scientific Support for Claims on Food" or PASSCLAIM for short, provides the generic tool to assess the scientific support for claims.

It needs to be accepted that nutrition studies cannot be 100% conclusive. On the other hand Regulatory Authorities require more evidence on efficacy, mode-of-action and safety. The question therefore arises : how much science is enough?

ILSI-Europe, ILSI-Japan and ILSI South East Asia Region have made considerable contributions to the understanding of functional foods, identification of biomarkers to measure the benefit of health claims and methodology for substantiation of claims. We have Dr Loek from ILSI-Europe, Dr Hamano from Japan and Dr Chan from ILSI-SEAR to speak to us about international regulations and guidelines.

The science about functional foods has still to go along way. More research has to be undertaken to understand the mechanism by which food components, such as phytochemicals, positively affect health and whether they work independently or synergistically.

In this conference we have the participation of many eminent scientists who will review the status of functional foods worldwide, identify areas where functionality of foods is well established and areas where future research is necessary.

Many functional foods can be part of our diet. India has a long history of functional foods though without the necessary scientific back-up. Functional foods can contribute a lot to improvement of health and reduction of disease and should be encouraged with proper regulation. The Food Safety and Standards Authority of India, with its task force on functional foods, are considering these issues and I am sure will bring out constructive legislation.