



# **ILSI India's Pioneering Work**

***1997-2022***

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**ILSI India** has had an interesting journey over the last 25 years. ILSI-India has been in the forefront of activities relating to **food and water safety**, nutrition, **risk sciences** and agricultural sustainability in India and other countries in the SAARC region. The high quality of the scientific information generated at its **Workshops**, **Conferences**, **Research Programs** and **Publications** have provided guidance to the scientists from **Government**, **Industry** and **Academia** on the actions to be undertaken in their areas of work. Capacity building activities conducted by national and international experts have imparted the necessary skills to the participants.

# **Focus Areas of Scientific Work**

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- **Nutrition and Health for All**
- **Lifestyle for improving Health and Environment**
- **Improving Food and Water Safety**
- **Building Agriculture Sustainability**
- **Enhancing Food and Nutrition Security**
- **Exploring new frontiers of science – Brain Health, Gut Microbiome, Nutritional Diagnostics, Personalized Nutrition, Food Processing Technologies, New Plant Breeding Technologies, Biotechnology, Nanotechnology**
- **Climate Change and its impact on Food and Nutrition Security and Water Availability and Food Safety**

# **Contribution of Some of the Key Scientific Activities Pioneered by ILSI India**

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# NUTRITION

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- **Generating evidence based science for adopting Food Based Approaches including Micronutrient Fortification of Foods to Address the Challenge of Eliminating Micronutrient Malnutrition - Since 1999.**
- **Bringing Attention to Vitamin D Deficiency and Its Adverse Impact on Health and Role of Fortification in Dealing with this Problem – Since 2010.**
- **Addressing Lifestyle and Diet Related Issues including Metabolic Disorders for Different Segments of Population Including Children, Adolescents, Elderly, Pregnant and Lactating Mothers, Persons affected by HIV/AIDS on the One Hand and Sports Persons on the Other - Since 1997.**
- **Creating Awareness on Consumption Levels of Fat, Sugar and Salt by Indian Population and Strategy for Reducing their Consumption to Levels Recommended by ICMR – Since 1998.**
- **Examining the Role of Healthy Gut Microbiome in Promoting Health and Immunity and Role of Functional Foods Including Probiotics and Prebiotics in Strengthening Gut Microbiome – Since 2009.**
- **Initiating Discussions on New and Innovative Approaches for Improving Public Health such as Nutritional Diagnostics, Personalized Nutrition and Bioactive Molecules – Since 2022.**

# FOOD AND WATER SAFETY

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- **Preparation of Vision 2025 on Water Quality Management: South Asian Perspective – Since 2002.**
- **Addressing the Importance of Harmonization of Food Regulations in SAARC Countries – Since 1997.**
- **Drawing Attention towards Modernizing Food Control System in SAARC Countries and Establishing Need for Strong Infrastructure and Training of Manpower for Offering Safe Food to Consumers – Since 2000.**
- **Preparing the Blueprint for Surveillance and Monitoring System for Food Safety in India – 2007-08.**
- **Highlighting the importance of use of Packaging Materials to ensure that food are safe as also drawing Guidelines for ensuring that Safe Packaging Materials are used – Since 2006.**
- **Examining the need for using Food Additives and their Safety Protocols – Since 1997.**
- **Imparting Skills in Good Food Laboratory Practices – Since 2016 .**

# RISK ASSESSMENT

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- **Improving Knowledge Base in Risk Assessment through organization of Expert Consultations, Workshops and Training Programs on Nutrient Risk Assessment, Chemical and Microbiological Risk Assessment, GM Foods and Plants, Detection Methods for GM Foods and Plants and Pesticide Residues – Since 1999.**

# NEW TECHNOLOGIES FOR FOOD AND NUTRITION SECURITY

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- **Looking at Safety and Benefits of New Technologies which can improve Food Safety, contribute towards Agriculture Sustainability, improve Nutrient Delivery Mechanism, improve Food Processing and Packaging such as: New Plant Breeding Technologies, Biotechnology, Nanotechnology, High Pressure Processing etc. – Since 1999.**

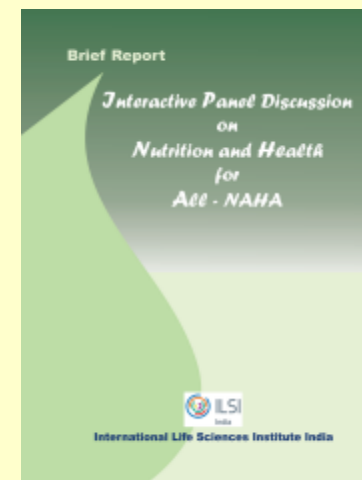
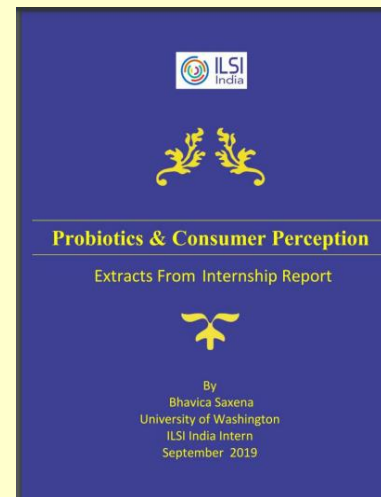
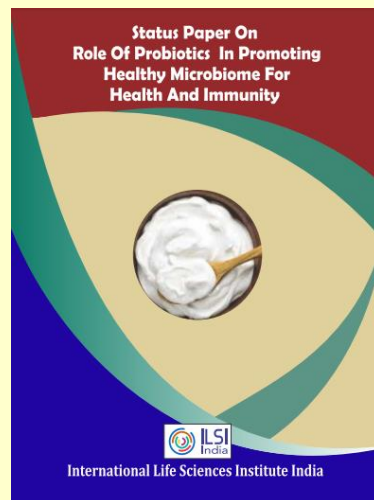
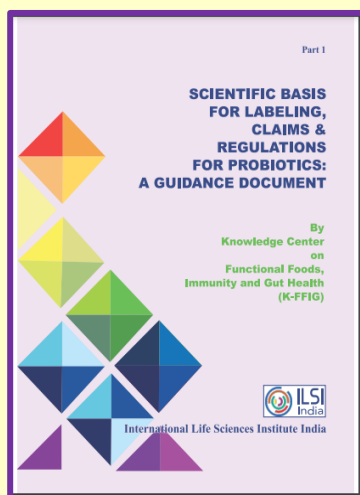
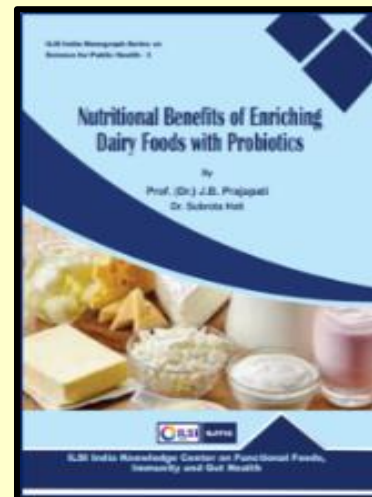
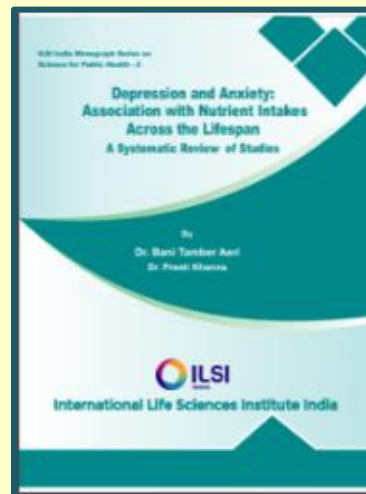
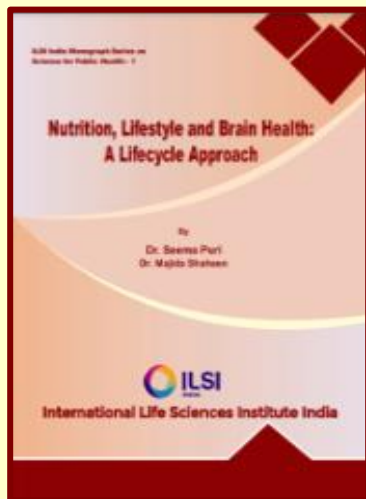
# CLIMATE CHANGE AND IMPACT ON FOOD SAFETY AND NUTRITION SECURITY

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- **Examining the impact of Climate Change on Water Availability, Agriculture Productivity, Food and Nutrition Security and drawing the Strategy for Mitigation and Remediation. Also identifying steps to bring Lifestyle Changes to reduce Carbon Footprints. Examining the use of innovative technologies for developing new varieties of Food Crops, Vegetables and Fruits which require less of land and water and use of eco-friendly Packaging Materials- Since 2013**

# ILSI INDIA

## LATEST PUBLICATIONS





# ILSI INDIA

## LATEST PUBLICATIONS



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**Functional Foods in Health and Disease** Home Editorial Team Issues

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**Use of probiotics for nutritional enrichment of dairy products**  
 Suvrata Hies, JB Prakash

**Abstract**

Several food products, prepared with the help of beneficial microbes, can fit into the current definition of probiotics which have been consumed by mankind since ancient times. Beneficial microbes are the agents that produce many fermented foods and beverages, which are popular in different parts of the world. Information about the use of products with healthy microbes are given in Vedic literature and are also described in ancient Egyptian and European treatises. However, systematic studies on probiotics started after the publication of the book, *Probiogenesis* of life, by El Metchnikoff in 1907. Our review discusses the use of probiotics as food and general products given a substantial role. This review intends to compile and analyze the literature pertaining to the use of probiotics as food products, especially for nutritional enrichment. The review will focus on the new issues reported to establish the requirements to ensure the efficacy and safety after grain-fermentation, process standardization, product formulation, bio-stability of the cells and diaspores, and the effect of processing, etc. Current literature also examines the mechanisms of action for probiotic function and the development of novel probiotic foods with health claims and meet specific nutritional requirements through fermentation are necessary to better understand the products and its application.

**Keywords:** Probiotics, prebiotics, nutritional enrichment, fermented foods, bio-stability, efficacy, regulation, safety, functional food

Full Text (Access) [Full Article]  
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Home > Archive > Vol. 52(6), 2022 > Current Issues

**Role of probiotics and vitamins in maintaining a healthy gut microbiome: recent advances**

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**Abstract**

While the concept of probiotics is a new, untested concept to developing organic products as a natural remedy. Probiotics and the microbes in a healthy gut are known to be a source of good health, unlike many factors. Along with the well-known and established health benefits for blood pressure, associated diarrhea and viral symptoms, asthma, overweight, autoimmune, acute pancreatitis, the gut and oral cavity, regenerative medicine, probiotics are now considered as a beneficial for maintaining health and well-being as well. This new branch of disease management is now termed as functional nutraceuticals and these nutraceuticals are referred to as probiotics. It is important to identify specific strains of probiotic and characterize them and conduct controlled clinical trials to establish their benefits. With emerging data evidence role of vitamins in modulating the gut microbiome, combining gut and probiotic and nutraceuticals is likely to result in powerful functional foods leading to gut immunity.

DOI: 10.31989/ijch.v52i6.10207

**Keywords:** Probiotics, Vitamins, Psychobiotics, Gut Brain Axis, Depression, Anxiety

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 DOI: 10.31989/ijch.v52i6.10207

REPORT

**Safety and Benefits of Nanotechnology**  
 Agriculture, Water Safety, Food & Food Safety, Nutrition, Packaging

International Life Sciences Institute India

**K-FFIG Research Briefs**  
 22nd January 2023

ILSI K-FFIG

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**SPOTLIGHT**

Review Article on "Use of Probiotics for Nutritional Enrichment of Dairy Products" sponsored by ILSI India K-FFIG, has been published in the *Functional Foods in Health and Disease Journal*.  
 Authors: Prof. J.B. Prakash, Chairman, Director, Centre for Nutrition, ILSI India, Institute of Health Sciences, University of Delhi, New Delhi; and Dr. Suvrata Hies, Senior Scientist, Food Safety Monitoring, ILSI, College of Dairy Science, Indian Institute of Technology, Gandhinagar, New Delhi.

Please download this article from:  
<https://doi.org/10.31989/ffhd.v12i01.1011>

Visit ILSI India Website [www.ilsindia.org](http://www.ilsindia.org) to download the following:

- ILSI India 2023 Anniversary Conference on Emerging Trends in Nutrition for Health and Longevity: Innovation May Follow (2022-2023), held on 12th October, 2022, featuring presentations and abstracts and CD. <https://www.ilsindia.org/2023/01/12/>
- ILSI India Monograph on Nutrition, Lifestyle and Brain Health - A Literature Review. <https://www.ilsindia.org/2022/12/22/>
- ILSI India Monograph on Bioprocess and Safety: Associated with Nutrition and Food. <https://www.ilsindia.org/2022/12/22/>
- ILSI India Monograph on Nutritional Benefits of Eating Dairy Foods with Probiotics - Review Paper. <https://www.ilsindia.org/2022/12/22/>
- Presentations and Proceedings of K-FFIG Seminar on Bioactive and Food and Food Safety, Nutrition and Challenges. <https://www.ilsindia.org/2022/12/22/>

K-FFIG Governing Council is headed by Dr. R. Sankaranarayanan, former Director, ICMR National Institute of Nutrition.

Earlier included as part of ILSI India Newsletter "News You Can Use", now it has been decided to launch this new **K-FFIG Research Briefs** to provide latest updates on research in the area of Gut Microbiome and how it can be strengthened through food-based approaches for improving health and immunity.

Contact K-FFIG Secretariat for its Activities  
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 ILSI K-FFIG Research Center  
 Central Institute of Nutrition, Health and Community, Patancheru, Hyderabad  
<http://www.ilsindia.org/ffig/>

**News You Can Use**

ILSI India

**ILSI India K-FFIG Report on Bioactives and Functional Foods: Safety, Benefits and Challenges**

Visit full text from <https://www.ilsindia.org/2022/12/22/> to download the following:

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- ILSI India Monograph on Nutritional Benefits of Eating Dairy Foods with Probiotics - Review Paper. <https://www.ilsindia.org/2022/12/22/>
- Presentations and Proceedings of K-FFIG Seminar on Bioactive and Food and Food Safety, Nutrition and Challenges. <https://www.ilsindia.org/2022/12/22/>
- Protein and Amino Acid Requirements of Infants, Children and Adolescents. <https://www.ilsindia.org/2022/12/22/>

Full Article (Access) [Full Article]  
 DOI: 10.31989/ffhd.v12i01.1011

**Roundtable on LIFE**  
 Lifestyle for Environment

on  
 24th November, 2021, New Delhi

International Life Sciences Institute India

**Report on Bioactives and Functional Foods**  
 Safety, Benefits and Challenges

Knowledge Center on Functional Foods, Immunity and Gut Health

# **K-FFIG Resource Centre**

<http://www.ils-india.org/kffig.htm>

**Recent Studies (Peer Reviewed Journals) –  
450 Studies & Publications**



- **Microbiome and Gut Health – 190 Studies**
- **Immunity and Probiotics – 102 Studies**
- **Prebiotics – 31 Studies**
- **Functional Foods – 51 Studies**
- **Gut Microbiome and Neurological and Neuropsychiatric Disorders- 30 Studies**
- **Gut Microbiome and Antimicrobial Resistance - 46 Studies**