



Seminar on Gut Microbiome and Neurodegeneration: Can Functional Foods Be the Key?

Date: Monday, June 23, 2025

Venue: Hotel Le Meridien, New Delhi

To Register Click the following Link:

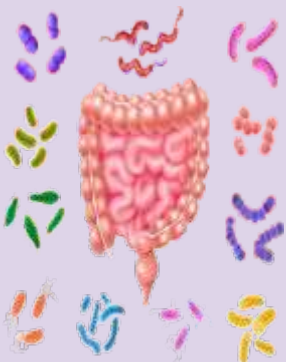
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International Life Sciences Institute India

K-FFIG

**Knowledge Centre on Functional Foods,
Immunity and Gut Health**



INTRODUCTION

Globally as well as in India life expectancy is increasing. By 2050 Global life expectancy is expected to increase from currently 73.6 years to 78.1 years and in India from 72.5 years to 78 years and the number of elderly in India will also increase from 158 million to 347 million. Improvement in healthcare system, decline in infant mortality, higher income, better access to medical care and lifestyle changes are leading towards increase in the population of those 60 years and above and at the same time increase in age related health issues.

The mechanisms contributing to the development of neurological diseases are same as those contributing to normal ageing such as: oxidative stress, neuroinflammation and vascular dysfunction. In pathological conditions, these mechanisms get aggravated, caused by different factors like genetic or environmental.

It is the progressive loss of functional neurons that is characterized as neurodegeneration. This is particularly pronounced during aging and results in debilitating conditions such as Parkinson's disease and Alzheimer's disease. Symptoms appear typically after 70–80% neuronal loss, resulting in irreversible damage. It is estimated that in the year 2020, 5.3 million people in India above the age of 60 (i.e., one in 27 elderly) had Dementia (Kumar et al., 2019). Such problems cause not only economic burden but adversely affect the lives of patients and caregivers.

Currently no cure is available. Several drugs have been approved but they can only alleviate symptoms and may lead to undesirable side effects. It is, therefore, critical that alternative approaches may be identified for both “Prevention” and “Management”.

In recent years, considerable information has been accumulated on the relationship between gut microbiome and brain function through the “Gut-Brain Axis”. The term "Gut Microbiome" refers to the complex ecosystem of bacteria that colonize the gut, including their genes, proteins, and metabolites (Korecka and Arulampalam, 2012). The gut microbiome is highly sensitive to negative external lifestyle aspects, such as diet, sleep deprivation, circadian rhythm disturbance, chronic noise, and sedentary behaviour, which are also considered as important risk factors for the development of neurological degeneration such as Alzheimer's. Studies have shown that intestinal dysbiosis, caused by changes in diet, antibiotics, non-steroidal anti-inflammatory drugs and pathogenic microorganisms, can adversely affect cognitive functions of the brain.

The bidirectional interaction between the gut and the brain is now well recognized. Emerging evidence has suggested the importance of the gut microbiome in this two way communication system (enabling the gut microbes to communicate with the brain and the brain with the gut) (Keunen et al., 2015).

The role of Functional Foods including products containing Antioxidants, Polyphenols, Bioactives, Dietary Fibres, Prebiotics, Probiotics, Synbiotic in protecting and promoting health is well known. Can they be beneficial for neuroprotection and prevention and management of neurodegeneration through management of gut microbes? This needs to be investigated.

FOCUS

As new research continues to shed light on brain health, there is an increasing need to discuss alternative ways to protect against neurodegeneration.

The K-FFIG Seminar will critically examine how Functional Foods might help prevent and manage these conditions through strengthening “Gut Microbiome”, and discuss whether more research is needed in this promising area.

AGENDA

08.30-9.15 Hrs. REGISTRATION AND TEA

09.15-10.00 Hrs. OPENING SESSION

Welcome Address by *Dr. B. Sesikeran*, Chairman, K-FFIG

Observations by *Dr. B. K. Nandi*, Chairman, ILSI India

Vote of Thanks by *Ms. Rekha Sinha*, Executive Director, ILSI India

10.00-12.00 Hrs. SESSION 1

**Introduction to the Gut-Brain Axis with Special Focus on:
The Gut Microbiome in Neurological Disorders and Aging**

CHAIR: Dr. Sunil Sazawal, Professor and Executive Director, Center for Public Health Kinetics (CPHK)

10.00 Observations by Chair

10.10 **Gamma Amino Butyric Acid (GABA) Producing Bacteria in the Modulation of Gut-Brain Axis**

Dr. Kanthi Kiran Kondepudi, Scientist-F, Healthy Gut Research Group, Food & Nutrition Biotechnology Division, National Agri-Food and Biomanufacturing Institute (BRIC-NABI), Mohali

10.25 **Role of Gut Microbiome in Neurodevelopment and Neurological Disorders**

Professor Sheffali Gulati, Professor, Faculty in-Charge, Disorders and Child Neurology Division, Department of Pediatrics, All India Institute of Medical Sciences (AIIMS), New Delhi

10.50 **Changes in Gut Microbiota Composition with Age and Relation with Cognitive Decline**

Prof. Dheeraj Khurana, Incharge Stroke Program and Professor, Department of Neurology, Postgraduate Institute of Medical Education and Research (PGIMER), Chandigarh

11.10 **Gut Microbiome Patterns: Assessing Mechanisms & Clinical Relevance in Schizophrenia**

Dr. Kuppan Gokulakrishnan, Associate Professor, Department of Neurochemistry, National Institute of Mental Health and Neuro Sciences (NIMHANS), Bengaluru

11.25 **Microbiome Dysbiosis in Parkinson's Diseases- Emerging Evidence**

Dr. Mamatha Ballal, Professor of Microbiology, Enteric Diseases Division – Head, Department of Microbiology, Kasturba Medical College, Manipal

11.40 Discussion and Sum Up by Chair

12.00-12.15 Hrs. Tea Break

12.15-16.05 Hrs. SESSION 2

Functional Foods: Mechanistic Insights & Clinical Evidence on How Functional Foods Influence Brain Health

12.15-14.00 Hrs. SESSION 2A

CHAIR: Dr. B. Sesikera, Chairman, K-FFIG

12.15 Observations by Chair

12.25 Functional Foods and Their Role in Brain Health with Case Studies of Specific Functional Foods and Their Neurological Impacts

Dr. Seema Puri, Former Professor, Department of Nutrition, Institute of Home Economics, University of Delhi, New Delhi

12.50 Dietary Interventions in Indian Knowledge Systems and Brain Functions- Few Examples

Dr. D. B. Anantha Narayana, CSO, Ayurvedic Trust, Bengaluru

13.15 Gut Microbiome and Neurodegenerative Disorders: Early Detection of Parkinson and Alzheimer and Intervention Strategies

Dr. Pankaj Seth, Professor and Scientist-VII, Molecular and Cellular Neuroscience, Neurovirology Section, National Brain Research Centre (NBRC), Gurugram

13.35 Discussion and Sum Up

14.00-14.30 Hrs. Lunch Break

14.30-15.15 Hrs. SESSION 2B

CHAIR: Prof. J. B. Prajapati, Chairman, Indian Dairy Association (West Zone)

14.30 Observations by Chair

14.45 Review of Human Clinical Trials and Animal Studies and Effects of Probiotic Supplementation on Cognitive Functions

Variability in Microbiome Responses between Individuals and Difficulty in Proving Causation vs. Correlation

Dr. Sunil Sazawal, Professor and Executive Director, Center for Public Health Kinetics (CPHK), New Delhi

15.15 Management of ASD through Probiotics

Dr. Prakash M. Halami, Chief Scientist and Professor-AcSIR and Head, Department of Microbiology and Fermentation Technology, CSIR— Central Food Technological Research Institute, Mysuru

15.35 Discussion and Sum Up

16.05-17.30 Hrs. SESSION 3**Panel Discussion on Integrative Approach, Future Directions and Innovation**

CHAIR: Dr. B. Sesikeran, Chairman, K-FFIG

PANEL OF EXPERTS:

Dr. D. B. Anantha Narayana, CSO, Ayurvidye Trust, Bengaluru;

Prof. J. B. Prajapati, Chairman, Indian Dairy Association (West Zone), Anand;

Dr. Bhabatosh Das, Professor & Head, Microbial Research Centre, BRIC-Translational Health Science and Technology Institute (BRIC-THSTI), Faridabad;

Dr. Neerja Hajela, Head – Science and Regulatory Affairs, Yakult Danone India Pvt. Ltd., New Delhi and

Dr. Sanket Borad, Director of Innovation, Helly Food & Dairy Consultancy, Ahmedabad

16.05 Observations by Chair

16.25 Observations by Panel of Experts

16.55 Discussion and Sum Up

17.30-17.45 Hrs. Tea Break

Dr. B. Sesikeran



Dr. B. K. Nandi



Dr. Kanthi Kiran Kondepudi



Prof. Sheffali Gulati



Prof. Dheeraj Khurana



Dr. Kuppan Gokulakrishnan



Dr. Mamatha Ballal



Dr. Seema Puri



Dr. D. B. Anantha Narayana



Dr. Pankaj Seth



Dr. Sunil Sazawal



Dr. Prakash M. Halami



Prof. J. B. Prajapati



Dr. Bhabatosh Das



Dr. Neerja Hajela



Dr. Sanket Borad

Who Should Participate?

The Seminar will be of interest to researchers, scientists and experts from Government; Academia; International Organizations; Health Professionals; NGOs; R&D organizations and Life Sciences organizations/ laboratories working on Nutrition, Functional Foods, Gut Microbiome, Immunity, Physical and Mental Health as also Industry manufacturing processed foods and beverages; food ingredients; fermented food, functional foods; herbs and spices, probiotics and prebiotics; postbiotics, bioactives and nutraceuticals.

Registration

Free Registration

Registration is FREE for: ILSI India Board of Trustees, K-FFIG Governing Council Members, Government and Academic Institutions and ILSI India Members, however, it is important to **register by Monday, 16 June, 2025.**

Registration Fee

A nominal Registration Fee: will be charged from representatives from Industry. Registration Fee will be:

- INR 3000 for registrations by **June 16**
- INR 4000 after **June 16**

Cheque / DD should be drawn in favour of **ILSI India** and forwarded to Ms. Varsha Bisht along with Registration Form at the following Address: **C-39, Ground Floor, Lajpat Nagar III, New Delhi – 110024.**

Please write to ILSI India for payments to be made through Bank transfers.

Registration Link

To register click the following link : <https://forms.gle/6edriR5CmBpG7u7k7>

If the Registration Link does not open please copy to the browser or use the enclosed [Registration Form](#).

Registration will be on **First Come First Served** basis. [Registration Confirmation](#) and [Participation Link](#) will be sent to the participants.

For any clarification email Mrs. Varsha Bisht : vbisht@ilsi-india.org or call her
at: Tel: 011-41654760 / 29848752 / 29843478

About ILSI India and K-FFIG

ILSI India is an entity of the International Life Sciences Institute (ILSI), headquartered in Washington DC., USA. ILSI India provides scientific inputs and secretariat assistance to the South Asian Region. It has headquarters in New Delhi. It is a scientific, non-profit organization.

ILSI India designs programs to foster multi-sector collaboration for conducting, summarizing, and disseminating science related to most pressing health issues in the region. ILSI strategy encourages global action on identifying and then resolving outstanding scientific questions in the four thematic areas that capture the core of ILSI/ ILSI India's work: Food Safety, Risk Science and Toxicology, Nutrition and Health, Sustainable Agriculture and Nutrition Security. They also help elucidate new opportunities for driving scientific progress. All activities follow Principles of Scientific Integrity which are part of ILSI Mandatory Policies. More information can be downloaded from: <http://www.ilsi-india.org>.

Gut Microbiome is an exciting new field of research. As the science of microbiome and the role of food based approaches in strengthening it over a lifetime is emerging ILSI India launched Knowledge Center on Functional Foods, Immunity and Gut Health (K-FFIG) - a center of excellence - in New Delhi in October 2019. The Knowledge Center acts as a Think Tank, involving stakeholders from Government, Academia and Industry, that works towards sharing relevant research and technological developments in the area of human microbiome and functional foods. K-FFIG has undertaken several activities including: organization of Scientific Meetings, undertaking Surveys, sponsoring Research, publishing Monographs and Articles in journals, creating Resource Centre on latest studies on Microbiome and Gut Health and Functional Foods including Probiotics and Prebiotics. For more information visit: <http://www.ilsi-india.org/kffig.htm>.



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