

NUTRA SUTRA

Need seen for global research ties



Prof. M S Swaminathan, inaugurating the 9th Nutra India Summit by lighting the lamp in presence of dignitaries (seen in picture from L-R) Jagdish Patankar, Dr V Prakash, Ravi Boratkar, Dr G Thyagarajan, Dr Judith Meech, Dr Pingfan Rao and Dr Rickey Yada

The 9th Nutra India Summit – three-day Conference and Expo in Bengaluru was inaugurated on Wednesday by Prof M S Swaminathan, Founder Chairman and Chief Mentor, UNESCO Chair in Ecotechnology, M S Swaminathan Research Foundation. “New Sutra for Nutra for emerging global economics” is the theme of the conference.

The highlight of the inaugural function

was presentation of 9th Nutra India Lifetime achievement award to Prof Swaminathan in recognition of his work in the agricultural and nutrition sector. The past recipients of Lifetime Achievement Award were Dr R A Mashelkar and Dr Ashok D B Vaidya. Dr Pingfan Rao, IUFoST President and Vice-President of Chinese Institute of Food Science & Technology, China, released a report on nutra sector overview. Dinesh Gundu Rao, Karnataka’s Minister of State for Food, Civil Supplies and Consumer Af-

fairs, presented the award and felicitated Dr Swaminathan.

Dinesh Gundu Rao explained importance of nutraceuticals and hoped that the focus needed for development of the sector would further enhance with the summit and deliberations that would take place.

The minister said there were many issues India was facing, issues related to wellness, stress, lifestyle, undernour-

ished children etc. and there was need to address these. There was food security Act which would address some of the issues, but nutraceuticals would play an

important role in resolving these issues further, he said. “It is an important field and we need to concentrate on that and pay attention to,” he added.

He stressed the need on improving the civil supply system to ensure that people get good foodgrains. The government spends huge amount on foodgrain supply and that amount should be utilised efficiently, he said adding that the government was working on this. The minister released the compendium of the summit.

Former Director of CSIR laboratories and former scientific secretary, COST-ED, Dr G Thyagarajan, suggested that a global research alliance for nutraceuticals development should be created. Such an alliance would act as an intellectual anchor or a platform for the industry to develop further. He said nutra sector was ideal for forming such an alliance since the companies in the sector have funds but no raw material.

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Zero hunger is a key challenge: Prof M S Swaminathan

“There are nearly 200 districts in India that have been identified as hunger districts in India. We need 100% access for food to all, increase in small holder and productivity, 0 loss or waste of food, and with that hunger can be eliminated in our life time. Zero hunger is a key challenge that we face. ‘New sutra for nutra’ - such an apt theme for this year’s nutra event,” said Prof. M S Swaminathan, Founder Chairman and Chief Mentor, UNESCO Chair in Ecotechnology, M S Swaminathan Research Foundation.

Addressing the gathering on “Nutra-

ceutical Science and Achieving the Zero Hunger Challenges” at the 9th Nutra India Summit, Prof M S Swaminathan said, “The South Asian enigma is that 39% of the kids suffer stunted growth and low birth weight. One in Four kids die due to hunger and malnutrition. In fact, under nourishment reduces nation’s economic advance by 8%.”

He said, “During 1970-85, worldwide there was vast famines and world scientists predicted that within 2030 population of the world would die of



Dinesh Gundu Rao, Minister of State for Food and Civil Supplies and Consumer Affairs Department, Government of Karnataka, felicitating M S Swaminathan, Chief Mentor, UNESCO Chair in Eco Technology with the Lifetime Achievement Award in presence of Dr V Prakash, FRSC, Distinguished Scientist of CSIR – India, Vice-President, International Union of Nutritional Science (IUNS)

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hunger rather than war and plague. We saw a Green revolution earlier. Indian farmer achieved greater progress in wheat production during 1964–68 period, as during the preceding 4000 years. In the recent past, 2013 proved to be a significant year in India for the struggle against hunger with the food security act conferring the legal right to food through parliament.”

“There are three major dimensions of hunger - Calorie deprivation, Protein deficiency and Micronutrient deficiency, but there are other food and non-food factors. Some of the challenges of the national food security bill is how to provide food and nutrition to all, how

to enlarge the bread basket and how to enrich crops,” he added.

Some of the challenges ahead, he said, are loss of food, climatic changes, shrinkage of per capita land and shortages of water resources, expansion of biotic and abiotic stresses, market volatility, sea water farming, and make the youth to take part in farming.

Speaking on educating people he said, “Some of the foods that we come across every day have plenty of nutritional value. We need to ensure that the message is passed on to the public. For example Moringa (drumstick) has 25 times more iron than spinach, 17 times more calcium than milk, 15 times more



potassium than bannans, 9 times more protein than yogurt and 10 times more vitamins than carrot, similarly orange fleshed sweet potato contains more beta carotene. Pearl millet contains high iron and Aamla is rich source of Vitamin C while golden rice is rich in Vitamin A. Besides, we need to form a community of hunger fighter, the main goals of this community is that there should be no wastage of food or loss of food, a better food consumption

system, improved health literacy and nutritional literacy,” he said.

“In our tryst to fight malnutrition there are communities in place in case of calamities. There are Global gene and seed banks in Europe and one in the Himalayas.” He concluded by quoting Hippocrates “Let food be thy medicine.” Earlier he was felicitated with the 9th Nutra India Lifetime Achievement Award in recognition of his work in the agriculture and nutrition sector. Dinesh Gundu Rao, Minister of State for Food and Civil Supplies and Consumer Affairs Department, Government of Karnataka, presented the trophy and shawl and citation to Prof Swaminathan. ■

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“We must take care that nutra sector is carefully nurtured and taken forward,” he added.

In his opening remarks, Dr V Prakash, distinguished scientist of CSIR-India,

the ‘Sector Overview’ prepared by NuF-FooDS Spectrum magazine.

Dr Judith Meech, Secretary General of the International Union of Food Science and Technology (IUFoST), Canada, said that 3 lakh food scientists across

very high nutritional value. Ensuring that even if a person has just a couple of cookies his or her full quota of nutrition was fulfilled, Dr Rao said. Compared to some of the other countries India and China were better places to make one happy in terms of food. But food safety and regulation must be of paramount importance. The education of nutrition was important for the common man so that he or she understands the nutritional value of the food one is consuming, he added.

Organising secretary of Nutra India Summit, MM Activ Sci-Tech Communications, MD and publisher, NuF-FooDS Spectrum, Jagdish Patankar, said atmosphere in the society regarding nutraceuticals has changed a lot. A decade back when the first summit was held nutraceuticals was a taboo and now we were almost on the verge of announcing nutraceuticals as a separate category. That was the contribution of the Nutra India Summit. During this summit, he said, the delegates should concentrate on three areas – science & innovation, industry and internationalisation of the industry with tie-ups etc and regulatory.

the world were connected with IUFoST. She gave details of the coming IUFoST event in Montreal, Canada, in August.

President-elect of IUFoST and Professor, Canada Research chair in food protein structure, Dr Rickey Yada, said he was visiting India so frequently that India was like a second home to him. He gave details of the IUFoST event in Montreal and hoped to meet the participants in Canada. IUFoST President and Vice-President of Chinese Institute of Food Science & Technology, China, Dr Pingfan Rao, said Research institutions and scientists the world over were working for betterment of food and improve the value of food by utilising science and technology.

Whatever said and done ‘food is precious.’ He quoted an example of an innovative cookie manufacturer in Taiwan who makes cookies that contain-



Vice-President of International Union of Nutraceutical Science (IUNS) and Chairman of the 9th Nutra India Summit, made two important announcements. He said the International Society for Nutraceuticals, Nutritionals and Naturals (ISNaN) has been formulated. A few days back its registration process had been completed.

The FSSAI rules and regulations for nutraceuticals were ready now and would be uploaded on the FSSAI website soon for the concerned people to give their comments, suggest amendments. He briefly traced the history of first nutraceuticals conference in 2003, wherein the then minister, Sushama Swaraj, had questioned how regulations could be formed for ancient knowledge.

Lighting of the traditional lamp by dignitaries marked inauguration of the event. Later, Dr Swaminathan released

The event features an International Conference that focusses on today's trends and tomorrow's opportunities delivered by experts from across the globe, a special Doctors & Nutritionists Forum, a CEO Summit, an Awards Function, Interactive Poster session - 'Walkway of Discovery', the partnering InterlinX platform, 'NuFFooDS', The Health & Food Expo. This year more than 15 countries are participating, featuring 70 renowned speakers from across the globe, covering 16 conference session. More than 500 delegates are participating in the Summit and 80 organisations from private sector, R&D institutions and Academia are participating in the Trade show and Poster session.

He said the perception about regulatory was that of a stumbling block. But, he said, it was actually a facilitator. Quoting the example of power sector, he said process of developing regulatory mechanism in new sector was always painstaking and not easy. The summit has organised sessions on the issue and a white paper will be prepared in order to create a right atmosphere for industry to flourish. Joint Managing Director, MM Activ Sci-Tech Communications, Ravi Boratkar, proposed a vote of thanks. ■



Prof. M S Swaminathan inaugurated the NuFFooDS Expo in presence of galaxy of dignitaries. Over 40 exhibitors are participating in the expo

“R&D should be evidence based that can lead to self regulations”

“R&D should be evidence based which can lead to self regulations and should involve Ethical marketing with transparency and public policy,” said Dr V Prakash, Vice President, International Union of Nutritional Science (IUNS), Hon. Director of R&D and Innovations and Distinguished Scientist of CSIR – India.

Speaking on Innovations in Nutritionals, Naturals, Nutraceuticals and Ayurvedicals in relation to epidemiology and the struggle with the regulations, he said “The journey from concept to product approval to marketing of Nutra-products is pebbled with fire stones of hard labour and hard core science that ultimately must reach the consumer with all its claimed benefits at a affordable cost.”

He highlighted upon the journey from ‘Concepts’ – ‘Monsoon’ which is important for innovation, the journey passes through proof of concepts, research and development, scale up process, process verification, sustainability, life cycle, new processes, new



Distinguish speakers from L-R – Dr V Prakash, Dr G Thyagarajan, and Dr B Suresh, shared their views at the first day Morning Mantra.

products, market forces, management, HR, profits, etc.

He emphasized on enhancing the food quality chain loaded with nutraceuticals along with ayurvedicals for its quality, regulatory and monitoring. He proclaimed that business chains of nutraceuticals with its food safety is dependent on GMP, GDP, HACCP, sensory, specifications, quality chain, training, eco friendly packaging etc.

He specified that the new approach the consumer has is to choose, is to choose

healthy foods and manage food costs and prevent medical expenses which needs to be kept in mind. Further Sir, expressed the integrated approach is the key to success.

He concluded “Let science be ethical, in combination and give best innovations-innovating the innovation through traditional wisdom and with modern support of science perhaps will open up new vistas for food regulatory and food safety for his safer and nutritious food from pediatrics to geriatrics”.

Sharing his views on Redefining Nutraceuticals Dr B. Suresh, Vice Chancellor, JSS University, Mysore & President, Pharmacy Council of India, New Delhi showed concern about the present situation of children in India and steps to be taken for eradicating extreme poverty and hunger which happens to be the key for malnutrition.

Comparing nutraceuticals and pharmaceuticals he said that Nutraceuticals does not require tests and regulation unlike pharmaceuticals instead it needs to be safe and properly labeled. The need for quality, efficacy, safety, stability, validity and sustainability will redefine nutraceuticals. Nutraceuticals focuses on urban elites only; he proclaimed that it should be redefined to meet the rural population also. Finally concluded with the question Is Nutra-vigilance required for safety?

Dr G Thyagarajan, former Director, CSIR Laboratories, former Scientific Secretary, COSTED, who chaired the morning mantra session remarked that grandma’s remedies gave way to Nutraceuticals and Pharmaceuticals”. In the newer era with modern technologies and approaches and people from different background working towards the same goal, he broadly called it as “Cosmonutraceutical”. ■

“There is a need for Smarter Innovations in Protein”

“Diets rich in protein and branched-chain amino acids can help with increase in muscle mass. There is a need for Smarter Innovations in Protein for its protein structure-function and efficacy, which go beyond the amount and source of protein, amino acids and peptides consumed and concluded the talk to integrate the consumer need in product design of next generation protein foods and beverages, said Dr Deepa Shenoy, Senior Research Scientist, Open Innovation - Amway Global R & D, USA addressing the gathering on “A 360° approach to innovating Functional Foods and Dietary supplements for the healthy ageing consumer.”

She was speaking at a session on R & D Innovation in Functional Foods & Dietary Supplements chaired by Dr D B A Narayana, Chairman, Herbal Products Committee, Indian Pharmacopoeia Commission (IPC).

Speaking on topic “Adaptation of Gac fruit to Indian soil and development of Lycopene” Dr Priti Vaidyanathan, Senior Manager, Technical Service,

Sami Labs explained that Gac is a good source of carotenoids such as lycopene and β -carotene. The pulp is composed of fatty acids which enhance the absorption of fat-soluble nutrients like carotenoids. Momordicacochinchinensis (GAC) has the highest content of lycopene of any known fruit or vegetable up to ≈ 70 times higher than tomatoes.”

She further said that epidemiological studies support the claim that higher blood or tissue levels of lycopene or higher intake of lycopene from dietary sources are beneficial in the prevention of atherosclerosis and CVD. Higher lycopene intake and higher serum lycopene is associated with lower bone resorption.

Lycopene supplementation shows lowering of risk of osteoporosis in menopausal women. Hence, Sami labs have come out with successful cultivation of Gac by providing innovative farming techniques and now successfully cultivated by farmers in Tamil Nadu, India.

Prof Dr Helmut Weidlich, Chairman, Institut Prof. Dr. Georg Kurz GmbH,



L-R: Dr Priti Vaidyanathan, Dr Deepa Shenoy, Dr D B A Narayana and Prof Dr Helmut Weidlich

Germany spoke on “Nutrition and Human Cell Growth the New Frontier for New Products”. In his address he showcased different types of organ cells that can be increased or decreased in proliferation by different individual food borne substances or different cocktails of food borne substances. Hence he suggested to do an enormous

amount of in vivo studies on probands when developing a new product destined for the controlled proliferation of specific organ cells and come up with a valid computer modeling of human cell interactions and pharmacokinetics, such as to predict the in vivo effects based upon the results of in vitro cell culture experiments. ■

IPR, institutionalisation key to nutra's future



(L-R) Dr J L N Sastry, Rajesh Kumar, Dr P M Murli, Dr G Thyagrajan, Dr V Prakash, Nigel Sunley, Dr Lekh Juneja, Dr V G Dhanakumar and Sarath Naru

Leading captains from nutraceutical industry converged to discuss subliming issues including future of nutraceuticals industry, development of human capital, bringing investment funding and protection of intellectual property.

Dr V Prakash, Chairman, Nutra India Summit emphasised on future way for nutraceuticals in global arena, safety of the nutraceuticals products, and global approach on the policies.

Dr G Thyagrajan, Former Director, CSIR Laboratories raised the issue of protecting the Intellectual Property Rights (IPR) for nutraceuticals products and processes. "The existing intellectual property rights are not enough to protect these technologies."

Sarath Naru, Managing Partner, Ventureast said, "While protecting the investment, we should also focus on making the existing technologies more marketable."

Dr Lekh Juneja, Representative Director & Executive Vice President, Taiyo Kagaku emphasised that science is key to everything. However, science doesn't mean anything if you don't have product.

Dr V G Dhanakumar, Director, Indian Institute of Plantation Management explored need to develop human capital for the industry.

Dr J L N Sastry, Head – Healthcare

Research, Dabur Research & Development Center, Dabur India put forward the concept of bringing all the nutraceuticals, Ayurvedic products, natural products under one umbrella of 'Natu-raceuticals'.

Rajesh Kumar, Director and CEO, SAMI Direct talked about empowering consumers to fuel growth of nutraceuticals. "Consumers need to educate about efficacy and safety of the products. Without education consumers will not be able to make decision, and ultimately there will not be growth in the industry."

Summarising the discussion Dr Prakash said, "We have huge varieties of natural products to choose from. Thus, maintaining quality of the products is going to be a key issue in nutraceuticals industry in future."

"People also need to be educated on the importance of nutraceuticals. This education need to be imparted during schooling. Also as much the harmonization of policies is required, so is harmonization of science to help harmonization of policies across the globe," he concluded. ■

Ingredients play key role in keeping good health

Speakers from different companies and organizations highlighting the outcomes of the research findings said that ingredients play key role in keeping good health. Dr Deepak Dave, Hon. Medical director MRC of Kasturba Health Society, Consulting Gynecologist and Head of Dept. Ob. Gyn. BSES MG Hospital and Dr V G Dhanakumar, Director, Indian Institute of Plantation Management, (IIPM), Bangalore chaired the session on R & D Innovation in Ingredients.

Dan Souza, Senior Director of sales and marketing, Nutrex-DBS, USA, in his talk on Innovations in Cranberry for Urinary Tract and Prostate Health, stressed upon role of proprietary blends of the whole cranberry reengineered and optimized for specific health conditions. Cranberry inclusion is contradictory however, it was concluded that it is safe, effective and well tolerated with no side effects, innovative, unique, proprietary ingredient for men's health.

Dr Jatinder Rana, Senior Principal Re-



Distinguish speakers participated in session on R&D Innovation in Ingredients. (L-R) Dr David Cai, Dan Souza, Dr V G Dhanakumar, Dr Deepak Dave, Dr Jatinder Rana and Dr Jagadish Mittur.

search Scientist, Analytical Sciences, Amway, R&D, USA spoke about the new approaches for the development of functional, botanical, ingredients for innovative products. He highlighted on Botanical Ingredients & Extraction Technology, High-Throughput biological Screening Process, Discovery of Ingredient, Formulation & Commercialization - Development of Innovative products.

Dr David Cai, Senior Regional Manager, Scientific marketing, Regulatory and External Affairs, BASF (Asia), Human Nutrition, ENH, Nutritional and Health, China highlighted on a case study of Plant Sterols- Heart Healthy Ingredients for Indians.

He stressed upon benefits of plant sterols - cholesterol lowering benefit, Natural cholesterol management without

negative side effects, have synergy with statin drugs to lower cholesterol, have synergy with life style intervention, low fat diet and other ingredients to lower cholesterol

Dr Jagadish Mittur, Head, Biotech Facilitation Centre, KBITS highlighted the role of IT-BT department in the promotion of nutraceuticals and phytopharmaceuticals. ■

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Editor: Milind Kokje ♦ Executive Editor: Narayan Kulkarni ♦ Associate Editor: Gwyneth Alphonso ♦ Assistant Editor: Ajay Ghatage ♦
Correspondent: Nikita Apraj ♦ Contributors: Dr Shyamala, Dr MS Hemalatha, Dr C Anitha, Dr Aisha Siddiq A, Dr Divya Prakash J ♦ Designer: Shridhar Kulkarni

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