Keynote Forum
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Food Science 2019





8th International Conference on

Nutrition, Food Science and Technology

December 09-10, 2019 | Dubai, UAE

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Raghu Pandurangi

SSci-Engi-Medco Solutions Inc (SEMCO), USA

Role of Vitamin E and Vitamin E derivatives in Cancer treatment and in offsetting toxicity by Chemotherapy

Recent epidemiological studies reveal that 35 % of cancer initiation may be related to food, lack of nutrition and sedate lifestyle. However, it is hard to connect directly which ingredient of which food and how long it takes to develop cancer. Although Vitamins including Vitamin E have several favourable health related properties, translating them to therapeutic dose using food matrix is hard which necessitates new formulation, supplements and delivery through a novel drug releasing technology. Chemotherapy, despite widely used for treatment of cancer is nonspecific resulting in the collateral damage to normal cells. Vitamin E is an antioxidant which can help repair the DNA damage to normal cells induced by chemotherapy. In order to deliver the optimum dose, Vitamin E was esterified with pegylation to make it water soluble and administered orally. The esterase enzyme available in the body hydrolyses the ester bond to release Vitamin E to reach the therapeutic level. On the other hand, the same Vitamin E was derivatized using a dipeptide linker which is cleaved by tumour specific enzyme which is overexpressed by cancer cells. The technology is often referred to as "A Priori Activation of Apoptosis Pathways of Tumour" AAAPT. Cancer cells are known for desensitizing themselves to intervention. AAAPT identified several dysregulated pathways to sensitize those cells which do not respond to chemotherapy. Targeted tumour sensitizing technology enables to expand the therapeutic index of current FDA approved chemotherapy by lowering the therapeutic dose without reducing efficacy. Optimization of drug design using Vitamin E resulted in reducing cardiotoxicity of the current chemotherapy drugs.

Speaker Biography

Raghu Pandurangi started his scientific career Ph.D. in spectroscopy followed by post-doctoral training at Radiology and Internal medicine, University of Missouri, Columbia where he remained as a faculty for 10 years teaching radiopharmaceuticals and chemistry and guided graduate students with funds from American Heart Association and NIH funding. He was a principle investigator in Schering AG, Germany where he directed and involved in 2 FDA approved drugs (AccuTect and NeoTect). He was a team leader at Mallinckrodt directing apoptosis imaging. He became an entrepreneur in 2013 inventing AAAPT technology for improving FDA approved drugs. Currently, he is the Founder, President and CSO of Sci-Engi-Medco Solutions (SEMCO) and Amplexi-LLC, recipient of several NIH grants and awards. He also an ardent percussionist (Tabla) and VP for Anu-Rag School of Music, A non-profit organization headed by his wife Guru Sandhya Pandurangi.

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David P Turner

Medical University of South Carolina, USA

Advanced glycation end products: A tumor promoting consequence of Nutrition

Our research has demonstrated that advanced glycation end products (AGEs) derived from diet can directly impact both pubertal developmental programs and neoplastic growth to increase cancer risk and progression. Most people are unaware of what AGEs are or the damage they can cause, but we are exposed to them every day through the lives we lead and the foods that we eat. The Western diet together with more sedentary habits means that lifestyle-associated AGEs are accumulating in our bodies at a faster rate than ever before. Changes in the AGE equilibrium due to lifestyle cause protein dysfunction, reduced genetic fidelity, and aberrant cell signaling activation which we believe contribute to cancer outcomes. Disparity populations defined by AGE-associated risk factors such as diet, smoking, drinking and physical inactivity often bear a greater cancer burden when compared to the general population (reviewed by the PI, Cancer Research 2015). Lifestyle associated AGEs therefore may represent a unifying biological consequence of the social, demographic and environmental risk factors that contribute to increased cancer incidence and mortality. Early life exposures during mammary development influence the breast microenvironment to increase breast cancer risk. We show that due to an innate ability to influence the cellular matrix, dietary AGEs disrupt mammary development during puberty and accelerate tumor growth and progression. Critically, dietary-AGE mediated effects on pubertal development and tumor growth were dependent upon the stromal activation of the receptor for AGE (RAGE). Our studies show that dietary-AGE activation of RAGE alters cytokine profiles and increases immune cell recruitment to produce an activated stroma. An activated stroma was characterized by the increased recruitment and activation of fibroblasts and macrophages. stromal cells adopt distinct metabolic patterns which function to maintain the energy requirements needed for cell differentiation and functionality. Pathway analysis of expression data from excised tumors shows that AGE consumption significantly impacts energy metabolism through the aberrant expression of MYC regulated transcriptional targets. Our combined data show that AGEs contained in the foods we eat can impact cancer risk and progression. Due to their links with lifestyle, both pharmacological and/or interventional strategies aimed at reducing the AGE accumulation pool may be viewed as universal health care preventive and/or therapeutic initiatives. This may be an attractive option for populations where lifestyle change is not feasible due to poverty, inability, illness, treatment side effects, time, apathy and/or depression.

Speaker Biography

Turner has accumulated over 20 years of basic and translational cancer research experience in the UK, Europe and USA and has a track record of success. Through peer reviewed publications, multiple intercontinental collaborations, and numerous scientific meetings around the world his work is internationally recognized. His research program has been dedicated to defining the biological mechanisms involved in promoting cancer with a emphasis on the effects of lifestyle and diet. In order to be successful in his chosen field he has established working collaborations with a multidisciplinary team of investigators including clinicians, epidemiologists as well as behavioral and population scientists in order to fully comprehend the translational link between lifestyle, cancer and cancer disparity. He continues to show a strong commitment to community outreach and has developed bridges with numerous community leaders and has presented at many community events.

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Samra Abouchacra

Al Ain Hospital, UAE

Why diets fail? A role for "Eat-ology" as a disruptive weight loss methodology

Obesity has become a global epidemic, which is rapidly spreading at phenomenal rates. The gravity of this "Globesity" epidemic goes beyond sheer numbers, as it is directly linked to numerous diseases that pose serious health risks and are responsible for escalating health care expenditures. Obesity is the single most important contributor to development of type 2 diabetes along with other metabolic disorders, all of which individually increase cardiovascular morbidity and mortality. Though the solution seems straightforward with weight reduction being the best cure, however, achieving and maintaining weight loss is extremely challenging. Diets have disappointingly had limited short term benefits with lack of sustainability and even rebound weight gain. In addition to their restrictive nature, there are even more complex personal behaviour and social factors affecting food ingestion that current day "diets" do not address. This lecture will highlight these shortcomings and explore dietary behaviour patterns promoting weight gain that may be critical in sabotaging weight loss efforts. Our GERG research group has undertaken a number of research initiatives including a multicentre survey aimed at understanding eating habits in overweight and obese individuals in our region. The published data will be shared for interactive discussion. Furthermore, a recently published novel eating behaviour modification concept called "Eat-ology" will be introduced. This intervention empowers individuals to identify their own specific "Eating Errors" and imparts techniques to convert them into "Eating Essentials." In this way, Eat-ology not only circumvents many of the shortfalls of today's "diets," but through non-restrictive, simple and practical principles it may enable the transformation of one's "way of eating" to support weight loss and its long-term maintenance.

Speaker Biography

Samra Abouchacra has had extensive clinical and academic experience in Canada and UAE. She has Canadian & American Board certification in Internal Medicine & Nephrology and master's in science from the Toronto Institute of Medical Sciences. She is the founder and previous chairperson for Academic Affairs department and previous chairperson of Nephrology department at Tawam Hospital. She also served as medical director of Urology Kidney Disease Service Line Council for the Emirate of Abu Dhabi and has recently held the post of Director of Outpatient Services at Tawam and now Al Ain Hospital in preparation for commissioning of the new facility. She has been actively participating in teaching and research activities with numerous publications in peer review journals and among country investigators for the International Dialysis Outcomes and Practice Patterns Study (DOPPS). She has membership in national & international medical societies and is a fellow of American Society of Nephrology.

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Muayad M Abboud

Hashemite University, Jordan

Antitumor action of Amygdalin on human breast cancer cells through selective sensitization to oxidative stress

The cytotoxic effects of amygdalin natural product on cultures of breast cancer cells were investigated in vitro. We used the cell lines MCF-7 and T47D, which are derived from luminal A subtype of breast tumors carcinoma. Though they vary in some molecular properties, these tumor cells share the presence of positive estrogen, progesterone receptors and lack of human epidermal growth factor 2. Our data demonstrated a growth suppression of MCF-7 and T47D by amygdalin in concentration and time-dependent manners. This growth suppression was concomitantly linked with an increase in the generation of malondialdehyde (MDA) and oxidized glutathione together with a decline in the total glutathione concentration and glutathione reductase activity. The proportional cell survival of these tumor cells was correlated positively with the total glutathione and inversely with the amygdalin or MDA levels ($p < 0.001$). In MCF-7 cells, the treatment with amygdalin showed 6 times less production of total glutathione as compared to the untreated matched tumor cells, whereas a similar amygdalin treatment of T47D cells yielded only 2.1 times difference in total glutathione generation between the amygdalin treated and untreated tumor cells. Similarly, the amygdalin treatment of MCF-7 cells exhibited 2.4 times higher production of MDA than in the untreated tumor cells, while such difference in MDA formation between the amygdalin treated and untreated T47D tumor cells was dropped to 1.3 times. These data support an in vitro mechanism of amygdalin antitumor action against breast cancer cells potentiated by the induction of oxidative stress. The cells of MCF-7 originated from a highly proliferating breast cancer tumors seem to be more vulnerable to the oxidative stress mediated amygdalin cytotoxicity than T47D cells which derived from a slowly proliferating breast cancer tumor.

Speaker Biography

Muayad M Abboud has done PhD in clinical biochemistry, Medical and biological school, University of Southampton, England, followingly his Postdoctorate Fellow in medical research unit, University of Sussex, Brighton, England.

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Jyoti D Vora

Dhirang Consultants, India

Organoleptic, biochemical and anti-microbial assessment of Goat cheese (Capra Aegagrus Hircus)

Goat cheese prepared by curdling raw goat's milk is one of the earliest dairy products known to man. It is one of the best alternatives to cow cheese. Goat cheese has a chemical profile that makes it favorable for people who suffer from aversions to dairy products made from cow's milk. Goat cheese is low in calories, sodium, saturated fats and cholesterol. Also, it is a rich source of high-quality protein, medium chain fatty acids and micronutrients like Vitamins A, D, K and B-complex and minerals like calcium, phosphorus, iron, zinc and copper. Goat cheese contains less lactose and smaller fat globules than cow's milk and cheese, making it easier to digest. The benefits of goat cheese are unexplored by majority of the culinary populations of the world. Goat cheese is therapeutically used for the management of lactose intolerance, osteoporosis, rheumatoid arthritis, digestive tract disorders and also acidosis. Goat cheese also contains bioavailable enzymes and factors, promoting healing of tissues post trauma. The consumption of goat cheese is thus recommended to enhance the physiology and biochemistry of the individual. Exploration of the nutritional and therapeutic profile of goat cheese is a popular topic of scientific research. In this paper, the proximate analysis of goat cheese was carried out. Also, the antimicrobial activity of goat cheese extract was ascertained against certain bacterial and fungal species. Also, an edible product using goat cheese was developed and it was subjected to sensory evaluation. The data obtained from the detailed questionnaire was analyzed statistically. This helped in ascertaining the acceptability of goat cheese among the populace. Prospects include isolation and characterization of alkaloids, characterization of fatty acids from goat cheese and description of the activity of enzymes present in goat cheese.

Speaker Biography

Jyoti D Vora Vora is an Academician, Head of the department, Consultant, Trainer, Research Guide and Researcher in Biochemistry and Food Science and Quality Control and her qualifications are M.Sc, PhD, F.S.Sc., MASFFBC, CME (USA), NET Cleared, Nutritional consultant at Raleigh Medical Centre, North Carolina, Certified Functional Foods Scientist(FFC,USA).

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Dipak Vora

Dhirang Consultants, India

Biochemical, organoleptic and novel product development from Carica papaya seeds

Carica papaya, commonly known as papaya, pawpaw and papita; is a delicious fruit with loaded nutrients having beneficial effect on human body. Papaya also has antioxidant effects and anticancer properties which improve heart health, fight inflammation, improve digestion and help to maintain overall health and wellness. Papaya seeds are small, round, black colored, encased in a gelatinous coat in the inner cavity of the fruit having a strong flavour similar to black pepper and small amounts of it are beneficial for overall health. The seeds contain large amounts of nutrients, including fibre (22g %) which is effective for combating constipation and other digestive problems. The present study was undertaken with the aim of developing nutritionally enriched product with incorporation of papaya seeds and its oil; thereby enhancing the well-being. Gastro-free churan balls were prepared using papaya seed as a main ingredient and blending it with other components like Carom seeds(ajwain,), Cumin (jeera,) and Fenugreek(methi). Oil and water were added in the ratio of 1:2, which acted as a binding agent to form balls. The product was standardized as natural product with no added preservatives and may be aimed to relieve constipation issues. Sensory evaluation was conducted to determine the overall acceptability of the product. Further, nutritional and shelf life study were also conducted in which it was seen that the product is nutritionally rich with diverse nutrients, including fibre (16g %). The shelf life study was performed, and it was observed that the total plate count was minimal in first few weeks, with gradual increase in later weeks. Also; the growth of spoilage organisms (coliforms, yeast and molds) originated after 2 weeks indicating decline in quality and further stating the product is microbiology safe for consumption for only 2weeks. However, further study may be effective to further enhance the nutritive quality and shelf life of the product. The sensory evaluation concluded that the product was acceptable by majority of the trained panelists.

Speaker Biography

Dipak Vora is a director of Dhirang Consultants, Mumbai and also an Academician, Consultant, Trainer, Research Guide and Researcher in Microbiology, Fermentation, Food Hygiene and Wine Evaluation, Documentation and Validation, Audits and Training. He was an associate professor (Retd) and consultant in Microbiology, Doctoral Research Guide of Two Universities with teaching and training experience of 34 years. He has authored more than 15 international and national scientific research papers in peer reviewed Journals. He Guided two M.Sc. students for their Degree (M.Sc. by Research) and four PHD students were working under him (two have been awarded their degrees). He was awarded for two minor research projects by the University of Mumbai and two minor research projects by UGC. Also he has been awarded for the best teacher award by Ramnarain Ruia College.

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Haralappa Paramesh

Lakeside Center for Health Promotion and Education Trust, India

Impact of Air pollution and Nutrition on Airway Diseases

There is changing disease pattern in India as per our National health profile 2018. The communicable diseases are decreasing from 61-33% and non-communicable disease are increasing from 30-55% between 1990 to 2016. Allergic airway diseases like Allergic Rhinitis and Asthma are the major early onset non communicable Chronic inflammatory diseases both in developed and developing countries. In India Allergic Airway diseases are the major cause of morbidity and an important psycho socio economic health burden. The economic burden to manage asthma is Rupees 140 Billion per year, and for the medication for allergic rhinitis is Rupees 1 Billion per year. Diet play a multifaceted role in shaping the observed worldwide trends of allergies. Sensitivity can occur by ingestion, inhalation of fumes while cooking and by skin contact. Nearly 10-12% of asthmatic children experience food allergies which can be both atopic and non-atopic. The common foods causing allergic airway diseases are milk, eggs, fish, peanuts, soy, yeast, cheese, wheat, rice and chocolates. Our questionnaire survey on 20,000 hospital patients shows 19.75% of their children's asthma is triggered by food. High intake of dietary antioxidants during pregnancy influence the postnatal susceptibility of atopic diseases in children by the Th1 cell response, the higher intake of meat, and during pregnancy increases the risk of asthma, allergic rhinitis and atopic dermatitis in children. Maternal obesity and weight gain in pregnancy increases the childhood asthma. C-section babies have higher increase of asthma due to deprivation of protective germs from the mother's birth canal. Separation of newborns from mothers soon after birth will increase the allergic rhinitis and their gut flora will be coliform and staph aures instead of non-allergic children of rooming in children with mother who have lactobilites and bifido bacteria.

~~Speaker Biography~~

H Paramesh is Pediatric Pulmonologist and Chairman Lakeside Hospital and Education Trust, Bangalore. He was a national founder chairman of IAP Environment Child Health Group. He has been a member international consensus on (ICON) childhood. Currently he serves as a national president pediatric association of India. His work on smoking and impact on child health was responsible in bringing about the antismoking legislation in Karnataka State. His work was instrumental in the Supreme Court of India to tackling air pollution in major cities. His work on traffic and non-traffic police was discussed in the Parliament for remedial measures. Many chapters in 32 Textbooks and 10 Training modules. He has an exemplary service with environmental health in social pediatrics from Indan Academic of Pediatrics IAP. He serves as a member committee on compendium of studies on Air Pollution and Health (IISc) Government of India

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Rakesh Kumar Gupta

Department of Home Affairs and Justice - Government of Punjab, India

Tobacco use and Obesity

Smoking and obesity are major public health challenges and the prevalence of both is increasing globally. Smoking increases the risk NCDs eg. cancer, respiratory and cardiovascular diseases, and is the leading preventable cause of death in developed countries. Obesity is the fifth leading cause of death, globally, and accounts for 44% of cases of diabetes and 23% of ischemic heart disease. The Framingham Study showed that the life expectancy of obese smokers is around 13 years shorter than non-obese, never smokers. Over 80% of smokers wish to quit smoking but only 33% attempt to do so. Of those who attempt to quit, 75%-80% relapse within six months. Addiction is the main reason for smokers failing to quit. However, concerns about weight gain are an independent factor in smokers deciding not to quit, especially young women. Also, the general perception that smoking may protect against obesity is a common reason for starting smoking among adolescents. Smokers have a lower body weight on an average than non-smokers but tend to gain weight after quitting smoking; however, active smokers who smoke more intensively tend to weigh more than light smokers. A link between obesity and smoking behaviour could have implications for weight control and smoking prevention strategies, as well as for prevention of multiple noncommunicable diseases. Obesity and tobacco smoking are important risk factors for a wide variety of noncommunicable diseases, but their inter-relationship is complex and not well understood. Observational studies consistently show an inverse association between current cigarette smoking and body weight, followed by weight gain after smoking cessation. Beliefs that smoking protects against obesity may be over-simplistic, especially among younger and heavier smokers. Quitting smoking may be associated with temporary weight gain. Therefore, smoking cessation interventions should include weight management support.

Speaker Biography

Rakesh Gupta has completed his M.D at the age of 29 years from Punjabi University Patiala- India. He's working as Director of Chemical Examiner Lab, State of Punjab. He is an Alumni of John Hopkins School of Public Health and University of California. He has received WHO Award 2015 on World No Tobacco Day, represented MOHFW in WHO ENDS Consultation in Panama 2016 and a consultation on Plain packaging in Geneva 2017 Contributed significantly to many National/International Conferences. Abstracts accepted and presented in WLCs Barcelona 2014, Cape Town 2015, Liverpool 2016, COPD Conference Tokyo-2018, APACT Bali-2018, NCTOH Mumbai 2019 and World Conference on Lung Health 2019.

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Rachna Chhachhi

Holistic Nutrition and Certified Cancer Coach, India

Nutrition to heal chronic conditions

As a rheumatoid arthritis patient, myself, 13 years ago, when I was bedridden and had deformities which I continue to have, I didn't have a choice not to heal myself. So, I went from getting pumped with methotrexate, facing severe hair fall, getting injections in my knuckles and bones without anaesthesia all at once, (13 injections in a span of 40 minutes!) to giving up medications completely and taking the path of healing. In retrospect, I understand that it may have been a risky thing for me to do but at that time I was driven by my pain and the focus to get rid of it. I managed to clinically reverse my rheumatoid arthritis, with negligible pain, no swelling, anti-CCP back in range from being above 2000, ESR and C-reactive protein back in range and a negative RA factor. It is only after I got certified as a nutritional therapist that my journey to help thousands of people with lifestyle conditions began. Lifestyle conditions today rely heavily on doctors, hospitals, hence increasing the burden on medical care, health care and health insurance. When we go back to the root causes of why these conditions began in the first place, it is much easier to reverse them without medications or with minimal medications. Management of these conditions with medications usually leads to various organs in the body being affected and a poorer quality of patient life. The focus of nutritional healing is to not only to reverse these conditions, strengthen the organs but also help the patient get a better quality of life and increase longevity. With clinical data and case studies with me in the last 11 years, I am happy to say that I have reversed type 2 diabetes, Rheumatoid arthritis, psoriatic arthritis, heart blockages, high cholesterol, hypertension, endometriosis and many more conditions without medications, with nutrition. At this conference, I will be sharing some of the clinical data via my presentation and how reports which were out of range came back in range as well as other data points for the patient before and after. When I share that I have been able to use nutrition effectively to reverse lifestyle conditions including cancer and depression, what does that mean? I do not use only physical nutrition; I also use emotional nutrition. The mind and body are connected with each other and in lifestyle conditions, the quality of life of the individual is affected, causing severe anxiety and in many cases of autoimmune conditions (which are not lifestyle conditions but aggravated by stress) and cancer (70% of all cancers are lifestyle related), there is severe depression due to physical disabilities, chronic pain and fatigue. In such cases, once we get the physical nutritional balance in place, we step by step start getting emotional balance in place via oxygenating the body with breathing techniques and meditation. Meditation has clinically been recorded to repair the DNA and I quote the research of Alberta Health Services, Nov 2014, from where this data has been taken. In this clinical data it's only proven that just 3 weeks of meditation was shown to increase the length of telomeres in breast cancer patients, hence scientifically demonstrating the DNA repair. The study was published online in the journal Cancer. This is the power of meditation, or what I commonly use as part of my emotional nutrition practice. With my case studies and a rich inventory of data coming up on clinical studies demonstrating the continued benefits of physical and emotional nutrition to heal chronic conditions, like HbA1C coming back in range & staying there by changing lifestyle habits, cholesterol & heart blockages reducing, auto antibodies reducing, inflammation & cancer markers coming back in range, we should be turning more towards using the science of nutrition to repair and restore the human body and mind rather than using suppressive techniques to just manage a chronic condition. Let us all rethink the way we treat our patients and integrate holistic

healing so that we can give them an integrated solution that reverses their chronic conditions, improve their quality of life and increases longevity. A lifestyle condition is something that is caused by the lifestyle. The focus should then be to correct the lifestyle which includes how we eat, move (exercise), and how we respond to stress. That is what encompasses physical and emotional nutrition and I have clinically reversed chronic lifestyle conditions by changing the TRUE cause of the disease: it's previous lifestyle.

Speaker Biography

Rachna Chhachhi is a PhD, Holistic Nutrition and Certified Cancer Coach. She has specialised in reversal of chronic lifestyle diseases without medication, as well as WHO certified in Malnutrition for infants & children. She is best known for her work with autoimmune patients, and she helps them reverse their disease clinically, which rheumatologists say is impossible. But through her and her patient's examples, she has proven in the last 11 years that you can have a pain free, symptom free and medication free life full of energy if you were diagnosed with an autoimmune condition. She is frequently invited to international medical conferences to share her case studies as Keynote Speaker. She has been Keynote Speaker at health conferences in London, Paris, Dubai, Singapore and New York, along with the medical community, to present her papers. She has a health column with Business World magazine and is the author of the book RESTORE. Her book on Cancer is releasing in February 2020. She has conducted over 500 health workshops and sessions for organisations like GE, Marico, Nomura, Accenture, Honeywell, Dunnhumby, Aon Hewitt, Aon Consulting, Cargill etc and for groups for doctors, communities for a cause and cancer associations. Rachna has been writing on health and wellness for 20 years. She has health columns with Business Today, Outlook Business Magazine and TOI blogs. She has earlier worked with GE Consumer Finance, India Today, Business Today and PPC Worldwide, a United Healthcare group company.

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Sunita Shailajan

Ramnarain Ruia Autonomous College, India

Evidence based assessment of Wild Himalayan Berry (*Myrica esculenta Buch*) in the management of Polycystic Ovarian Syndrome

Myrica esculenta Buch.-Ham ex D. Don (Myricaceae), commonly known as Wild Bayberry is locally more popular as Kaphal. It is a sub-temperate evergreen tree distributed in the mid-Himalayan regions between 1300 meters and 2100 meters spanning from Pakistan, India, Nepal and China. Traditionally the fruit is relished by local communities and is also made into pickles and drinks. It is highly valued for its medicinal uses. Its bark, flowers, fruits and leaves are used in Ayurvedic and Unani systems of medicine against various ailments like menorrhagia, asthma, anaemia, tumors, bronchitis, menstrual disorders etc. Myrica esculenta is reported for its hepatoprotective, antibacterial, antifungal, anti-helminthic and anti-inflammatory activities. It is an important ingredient of Ayurvedic formulations like Chawyanprash, Katphaladi churna, Khadiradi gutika and Pushyanuga churna etc.

The plant is reported to be rich in various bioactive phytochemicals like gallic acid, ellagic acid, catechin, myricetin, stigmasterol, beta sitosterol, lupeol, quercetin etc. The fruit is also rich in amino acids, ascorbic acid, caffeic acid, trans-cinnamic acid etc. Current study evaluates the potential use of this wild Himalayan berry in the management of Polycystic Ovarian Syndrome (PCOS). PCOS is a reproductive disorder with multiple etiological factors severely affecting the fertility of the woman. PCOS also leads to obesity and diabetes. The current work envisages the use of this berry as a nutraceutical supplement during the therapeutic treatment of PCOS. This work evaluates the quality parameters of the Himalayan berry using phytochemical fingerprints developed using HPTLC. The quantitation of bioactive marker; gallic acid has been achieved with a validated HPTLC technique. The paper reports experimental evidence in support of efficacy of the berry in mitigating symptoms associated with PCOS using the rat model. The bioavailability of bioactives from the berry is also demonstrated using pharmacokinetic studies in rats.

Speaker Biography

Sunita Shailajan (Ramnarain Ruia Autonomous College, Mumbai, India, currently working as a principal investigator in DST - SERB project, Govt. of India) Area of specialization: Quality evaluation of traditional formulations using HPTLC and HPLC techniques, pharmacological (toxicity and efficacy), and pharmacokinetics. Patents-02 Member HPTLC association (HPTLC ASSOCIATION International Association for the Advancement of High-Performance Thin Layer Chromatography), Switzerland.

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Neeraj Jain

Sri Guru Ram Das University of Health Sciences, India

Dietary habits as cause of Cancer worldwide

It is estimated that 5.2% of new invasive cancer cases in adults age 20 and over in 2015 resulted from a poor diet. Of all the different kinds of cancers, colorectal cancer showed the highest numbers of new diet-related cancer cases. Middle-aged men, ethnic and racial minorities had the highest rates. Low intake of Whole grains, Dairy products, Vegetables, Fruits and High intake of Processed meats, Red meats, Sugar Sweetened Beverages (SSB) is a cause of increased risk of some site-specific cancers.

NUMBER AND PERCENTAGE OF CANCER CASES ASSOCIATED WITH INADEQUATE DIET

- Cancer of the colon and rectum (40%)
- Cancer of the mouth, pharynx, and larynx(25%)
- Cancer of the Uterus (6%)
- Breast (post-menopausal) (1.5%)
- Kidney cancer (4%)
- Stomach cancer (7%)
- Liver cancer (3%)
- Pancreas (1%)
- Esophagus (adenocarcinoma) (5%),
- Thyroid cancer (1%)
- Prostate (advanced) (1%)
- Ovary (1%)
- Gallbladder cancer (3%),

DIET-ASSOCIATED CANCER COMPARED WITH ALCOHOL INTAKE, OBESITY AND PHYSICAL ACTIVITY

Diet-associated cancer was:

- The same as alcohol intake (4-6%),
- Slightly lower than excessive body weight (7-8%)
- Higher than physical inactivity (2-3%).

It is important to deal with unhealthy poor diet at the population-level in order to reduce the burden of cancer worldwide. It is necessary to promote high intake of whole grained breads and cereals.

Conclusion: Cancer is the leading cause of death in the world now. It is important to prevent it with good healthy diet and avoid dangerous cancer-causing foods like processed meats and sugar sweetened beverages (SSBs).

Speaker Biography

Neeraj Jain is a leading Radiation Oncologist and Professor at Sri Guru Ram Das University of Health Sciences Amritsar. He is Vice President AROI. He has numerous publications and presentations in International forum. Member of ASCO, ASTRO,FARO.

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Tejinder Pal Singh

Lala Lajpat Rai University of Veterinary and Animal Sciences, India

Probiotics intervention: A promising approach to control Metabolic disorders and infections

Microorganisms are closely associated with and controlling various metabolic activities directly or indirectly in humans. The disruption and/or any disbalance in the microbial composition may be linked to different metabolic disorders. The chemotherapeutic treatments used to cure the diseases are also known to pose negative health impacts; also the development of antibiotic resistance among pathogens has challenged or limited their applications to control infections. Therefore, there is a need to discover natural means to prevent and cure the infections and other metabolic disorders. Probiotics intervention as supplements or consumption of probiotics carrying food products is one such promising approach that can help maintain microbial homeostasis; thereby lead to healthy life. In our lab, Lactobacillus reuteri strains from breast fed infant feces were isolated and screened for various probiotic attributes. Among various strains tested, L. reuteri LR6 showed maximum tolerance to simulated gastric and duodenum conditions, auto-aggregation, adhesion to Caco-2 cell lines. The strain showed cholesterol lowering and pathogen inhibition abilities under both in-vitro and in-vivo conditions. Also, it was evident that Cell surface proteins play an important role in probiotic activities, such as survival in intestinal conditions, adhesion etc., of the strain LR6. The cell surface proteins and extracellular proteins from the strain LR6 were also found to play an important role in pathogens inhibition and controlling the expression of various genes involved in gut barrier functions using Caco-2 cell lines. It is believed that the indigenous strain L. reuteri LR6 has great potential and can be explored further for practical application.

Speaker Biography

Tejinder Pal Singh has completed his PhD at the age of 26 years from National Dairy Research Institute, Karnal, India. He is working as an Assistant Professor in Dairy Microbiology Department, College of Dairy Science and Technology, LUVAS, Hisar, India. He has published over 15 research and review articles, 6 popular articles, 4 book chapters that have been cited over 150 times. He has also received best paper and best poster awards at different platforms.

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