

Report by Dr JB Prajapati

on

International Seminar & Workshop on
“Fermented Foods: Nutrition, Health Status and Social well-being”
National Research Centre, Cairo, Egypt during 13-15 Nov 2017



I participated in the International Seminar & Workshop on “**Fermented Foods: Nutrition, Health Status and Social well-being**” organized by the Society for Women in Science in Developing Countries (OWSD – Egypt) and Swedish South Asian Network on Fermented Foods (SASNET-Fermented Foods) during 13-15 November 2017 at National Research Centre, Cairo, Egypt. This seminar was a part of the First International conference of the Society for Women in Science in Developing Countries (OWSD – Egypt) on the theme “**Sciences for Women: Development and Innovation**”

I participated in the conference as one of the **keynote speakers**, as **Chairman** of one of the sessions and as Coordinator of SASNET-FF being the **co-organizer of the program**.

On 13th November at 10.00 am the conference was inaugurated by Prof Dr. Ashraf Shalaan, the President of the National Research Centre. Dr Mervat Foda, Chairman of the Society for Women in Science in Developing Countries (OWSD – Egypt) gave welcome address and Dr Baboo Nair, Chairman, SASNET-Fermented Foods gave a brief presentation about the activities of the network and purpose of organizing this seminar in Egypt. Head of Medical Research Division of NRC as well as President of Egyptian Academy of Scientific Research & Technology were also present in the program and they briefly talked about the importance of women in science.



Followed by inauguration, there were three brief talks from National council for women, Egyptian syndicate of scientific professions (ESSP) and applied art designer syndicate.



Sessions 1 & 2 were on ‘Health’ on 13th November and the talks were on autism spectrum recovery, bone health in women, osteoporosis in women, salivary gland tumors, breast cancer, obesity, anxiety, etc. However all of them were in Arabic.

On second day, 14th November, the first session (session 3) was on Fermented Foods and it was chaired by Dr Baboo Nair, Chairman of SASNET-FF and Emeritus Professor from Lund University, Sweden.

We had six lectures in the session and mine was the first keynote address. My lecture entitled “**Application of Probiotics in Women’s Health**” was on the main theme. I gave brief introduction about our heritage of consumption of fermented foods containing healthy bacteria and use of foods for health benefits. The science has proved now that these healthy bacteria, which are called as probiotics give various health benefits to the consumers.



Among various health effects of probiotics, a few strains have been found to have special benefits in women’s health. These beneficial effect is mainly related to maintenance of healthy vaginal flora and there by control many ailments related to urogenital tract, mainly bacterial vaginosis (BV). BV is said to be the major problem because it directly affects women’s quality of life and



health care systems. Several strains of Lactobacillus spp. have been found useful, restoring a normal vaginal flora, that also reduces the risk of urogenital infections such as candidiasis, genital herpes, HIV, etc. apart from bacterial vaginosis. These urogenital infections affect an estimated one billion women each year. The size of this problem and the increased prevalence of multidrug resistant pathogens make it imperative that alternative remedies need to be found. Probiotics have therefore come out as a potential alternative to drug and more than 25 brands

of commercial probiotic preparations are available in market at present. Apart from urogenital health, probiotics also improve digestive and immune systems which help protect the consumers from other problems. Common problem of iron and vitamin deficiencies in young girls and pregnant women can also be taken care by selecting a probiotic formulation with appropriate supplements.



After presenting a brief review about the work done in the area of probiotics for women's health, I presented a summary of research work carried out at our laboratory in Anand Agricultural University. A study was done at Anand Agricultural University to develop an ointment for treatment of Bacterial vaginosis using our own probiotic isolate of

Indian origin, *Lactobacillus helveticus* MTCC 5463(V3). Comparison of readymade emulsion from market and laboratory made emulsion with different concentrations of selected strain was done by determining viscosity, pH, viability and rate of freeze thaw stability. The developed cream with MTCC 5463 as probiotic was able to inhibit indicator organisms *G. vaginalis*, *Candida albicans*, *E. faecalis*, *S. aureus* and *E. coli*. The sub-acute vaginal toxicity study conducted in rabbit model showed that cream made was giving no side effects and is safe for human clinical trials. Another study was on development of probiotic cream for cosmetic applications using our strain *Lactobacillus helveticus* MTCC 5463. The cream was tested for antibacterial activity against skin pathogens and also other tests measuring skin lightening effect and antioxidant activities.

The other speakers in the session were;

- Dr Pratima Khandelwal from Biotechnology Department of New Horizon College of Engineering, Bangalore, who talked on bacteriocins from probiotics, their mechanism of action and applications in food industry.
- Dr Sourish Bhattacharya from CSIR-Central Salt and Marine Chemicals Research Institute, Bhavnagar talked on cost effective gamma linolenic acid from microalgae through bio-refinery approach.
- Ms Mona Mahmoud from NRC, Egypt talked on industrial production of microencapsulated lactic acid bacteria.
- Dr Birendra Mishra from RDAP, North Eastern Hill University, Meghalaya talked on probiotic potential of different lactobacillus isolates from the ethnic fermented foods of Garo hills.
- Dr Mazahib Mohammed from Centre of Research and Industries, Cairo talked about effect of different processing methods on chemical composition and sensory quality of soymilk.
- Dr Kanchan Mogha from SDAU, Dantiwada talked on development of probiotic cream for bacterial vaginitis.

Session 4 was on role of women in Egypt in different areas like art, creativity, cinema, urban planning, gender development, etc. which was in Arabic and I did not attend it.



On 15th November, Session 5 was chaired by me. It was a session with diverse topics and some presentations were in English and some in Arabic. Total 5 presentations were delivered in the session, which were as under:

- Dr Hassan Hassana, Professor of Nutrition from NRC talked on optimal use of animal fats and focussed on useful and harmful fats.
- Dr Ahmed El Salam from NRC talked on potential risk of food colours.
- Prof. Baboo Nair from Lund University, Sweden talked on concept of Hildur Lassi – a probiotic fermented food from oats and milk.
- Dr Mohamed Sayed Ahmed from Ministry of Trade and Industry, Egypt talked on Competitiveness of Egyptian dairy products in the most important international markets.
- Prof. Fatma Hasan from NRC talked on role of Dairy Department for developing and creating new dairy products in Egypt.

The final session was a closing ceremony, where in best poster awards as well as appreciation certificates who were engaged in organization of the seminar were given.

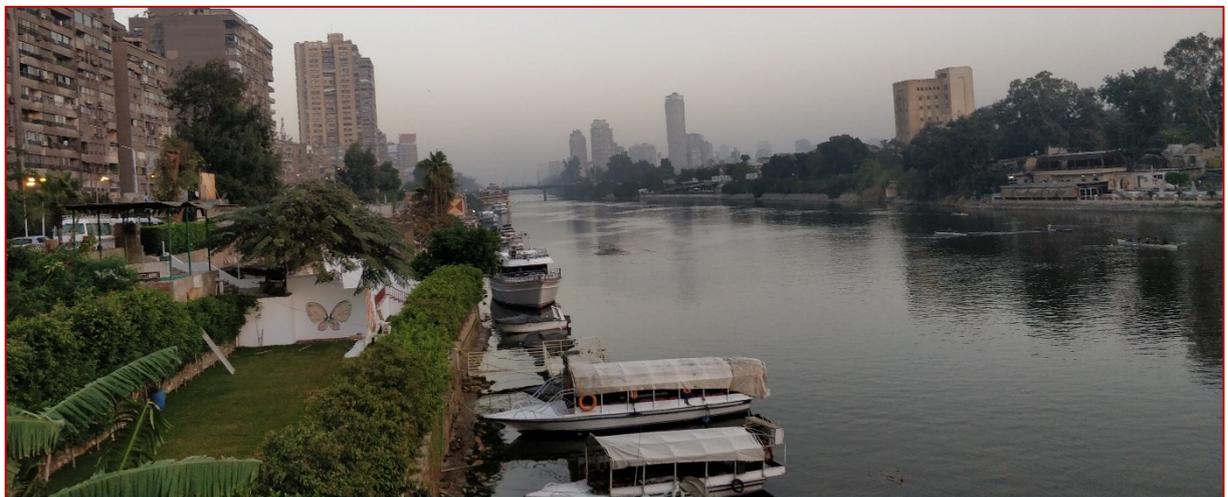
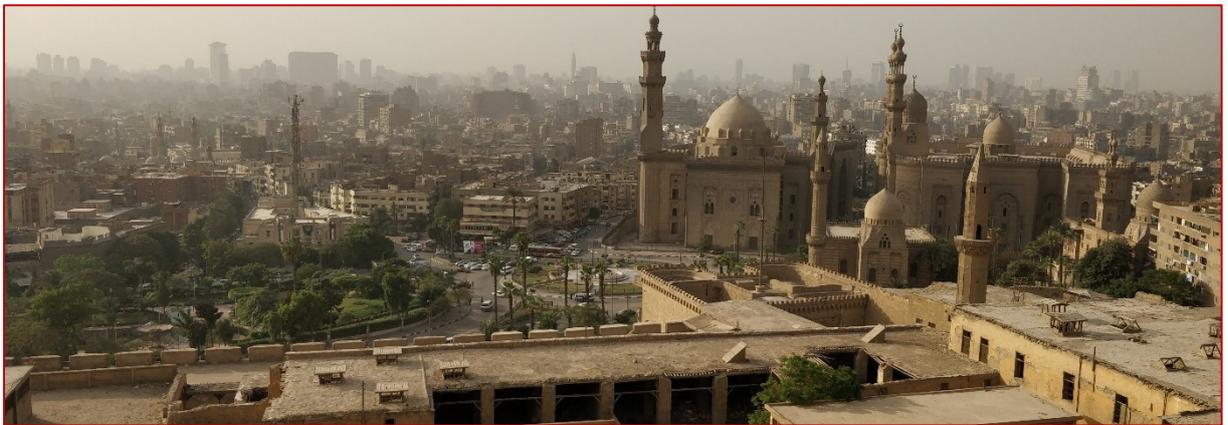
In the conference, about 150 delegates were present including 8 delegates from India. Apart from invited talks, the seminar had poster session, where important work of students was presented. One of our past students and now working at Dantiwada, presented a poster on Development of fiber fortified probiotic Shrikhand.

Key learning from the seminar:

- Network on Fermented Foods, initiated by us in 2003 is growing and is motivating the students and scientists to take-up research on nutritional and health aspects of fermented foods for the well-being of the society.
- The Women scientists gathered at conference demonstrated that women scientists are dominating in Egypt in food research as well as health and wellness sector, including medical education.
- Work done on probiotics for women's health at Anand Agricultural University was well received and appreciated by the delegates and a few students have shown interest to come to AAU and work in these areas.

Sight seeing

In the leisure time, we had some sight seeing. Egypt is an ancient civilization, which rose around early bronze era, probably before 3100 BC. It believed in many Gods and worshiped river, sun and nature. Nile is the longest river crossing 4100 miles is a life line of Egypt and entire Agriculture is dependent on it. Ancient Egyptian believed that soul could not live without body and hence learnt technique of mummy making with chemical called Natron. The bodies of important persons were buried with their belongings in Pyramids. I visited Pyramids in Giza, Pharaohic village, citadel and walked on the bank of Nile.



Acknowledgement:

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