It was with tremendous sadness that IUFoST received the news that Dr. Lilian Marovatsanga, our recently elected President, had passed away in Zimbabwe on 19 October 1999.

MEMORIES OF A DEAR FRIEND

Others will pay deserved tribute to Lilian Marovatsanga’s scientific accomplishments: her doctorate from the University of Reading, her post-doctoral studies in the USA, the energy and imagination devoted to her Institute at the University of Zimbabwe. I remember most vividly her generous disposition, infinite goodwill and merry heart.

Several years ago, in Harare, there was a meeting of scientists from the government, the University and the private sector. Lilian, when she arrived shortly after the meeting had started, came straight from the door and kissed me warmly on both cheeks. The Chairman, a distinguished Zimbabwean scientist, commented: “There would appear to be an unusual display of intimacy in a scientific meeting”. Lilian responded: “Oh that’s alright, Joe’s family; we come from the same village.”

Lilian’s untimely death is a tragic loss for many who affectionately admired her, but most sorrowfully for her family. At a time when one often reads of children feeling neglected by overly busy parents, it was a joy, during many visits to her home, to observe the exceptional loving care and affection which Lilian and Paul bestowed upon their young family.

It comes as a melancholy tragedy for Africa, Zimbabwe, the University and international food science. Lilian was the first African woman to be elected President of an international scientific union. In July 1991, when ECSAFoST was created at a conference in Harare, where males were in overwhelming majority, Lilian was elected the first President. Those of us who were privileged to serve on her advisory committee, witnessed with admiration, the purposeful energy and creativity with which she developed and directed the Institute of Food, Nutrition and Family Sciences.

The loss to IUFoST cannot be measured. As President she would have inspired the realisation that, for the less privileged people of the world, food science and technology must serve a more profound social purpose than is generally perceived among affluent communities.

To paraphrase John Donne: Lilian’s death diminishes us all, because she was so involved in and dedicated to Mankind.

— Joseph H. Hulse, Past President, IUFoST
Dr. Marovatsanga was an inspiration to the international food science and technology community. She was also a person full of energy, warmth and joy and she will be greatly missed by her colleagues and friends around the world. IUFoST extends its deepest sympathy to her family.

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**CONGRESS X**

**FOOD PERSPECTIVES AND FOOD DEMAND BEYOND 2000**

**EXCERPT FROM THE KEYNOTE ADDRESS TO CONGRESS X**

**DR. JOHN R. LUPIEN**

While ever-increasing food supplies are needed to meet the demand created by a growing population, the problems of hunger and malnutrition will not be reduced without reducing the underlying impediment – mainly poverty and under-development – to adequate access to food by all individuals. Poverty, social inequality and lack of education are the primary causes of hunger and malnutrition. Poor and disadvantaged households are the most affected by malnutrition, and poor health related to malnutrition compounds their situation by further reducing already meager resources and earning capacities, thus increasing their social and economic problems. This, in turn, contributes to further declines in future human, economic and social development. Prospects for improving the food and nutrition situation in developing countries is likely to depend on the prospects of those countries for raising incomes, reducing poverty and improving overall social and economic conditions. Without social and economic programmes to alleviate poverty, society will continue to be caught in a vicious cycle of undernutrition and under-development.

At the World Food Summit, governments and international organizations arrived at a consensus on key strategies for improving food security and nutritional status. They identified the major factors in world food security – constraints on food production, population growth, urbanization rates, changing dietary patterns, investment in research, conflict and instability, government policy and investment in agriculture – and agreed to make concerted efforts in each and all of these critical areas.

What is needed for improved nutritional well-being and sustainable food security? Better agricultural systems and improved farming systems are needed, along with the prevention of food losses and better food processing and marketing systems. Feeding the world’s cities will require investment in agriculture – and agreed to make concerted efforts in each and all of these critical areas.

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**IUFoST PRESIDENT — DR. LILIAN MAROVATSANGA**

Executive Committee since 1991 was a driving force in furthering the cause of food science and technology internationally. She worked tirelessly to promote food science for the betterment of those less fortunate and she was pivotal in bringing Africa into the international food science community, arranging workshops on health issues, and seminars on food security for the benefit of those around her.

The IUFOST Budapest Declaration exemplified Lilian’s work towards a world where “access to nutritionally adequate and safe food is the right of every individual and our commitment to protect and promote the nutritional well-being for all.”

Lilian’s activities ranged from her home country Zimbabwe, where she was head of the Institute of Food, Nutrition and Family Sciences in Harare over the surrounding regions and on to the world. Dr. Marovatsanga initiated the first regional BSc programmes in Food Science and Technology at the University of Zimbabwe and established linkage with many institutions worldwide for collaborative research and for student and faculty exchange.

She co-founded the Zimbabwe Society of Food Science and Technology and organised the first regional conference on Food Security, Safety and Quality at which the IUFOST regional association of food scientists, ECSAFOST, was launched. A joint IUFOST/ECSAFOST conference coincided with the 1994 IUFOST Executive meeting which Lilian organised at Victoria Falls in Zimbabwe. It was the first IUFOST event ever held on the continent of Africa. The conference was noteworthy for the publication of the Victoria Falls Declaration, stating IUFOST’s commitment to an action plan for Africa in support of the World Declaration on Nutrition, Rome 1992. Lilian was also Director for the East, Central and Southern Africa Maternal and Child Nutrition Training Programme which gathered participants from the whole of Africa.

Besides her active involvement in IUFOST, internationally, Lilian was well respected and consulted by such organisations as Food and Agriculture Organisation and the World Health Organisation on food-related issues. With them, she organised many workshops and seminars on food safety, quality, and training programmes for Africa. Lilian was a member of the Advisory Group on Nutrition of ACC/SCN (United Nations Administrative Committee on Co-ordination - Sub Committee on Nutrition) She committed herself to several projects initiated by SCN, including most recently, the Strategy for Accelerating Nutritional Improvement at the Country Level.

Lilian’s work in food science, food technology and nutrition will be remembered for the cheerful enthusiasm, commitment and whole-hearted dedication which she brought to everything she did. Her legacy will be the benefit that will accrue, to people in her own country Zimbabwe, as well as in many poorer countries in Africa and beyond.
In most developed countries, and for many middle and upper-income people in developing countries, the major nutritional problems are related to overconsumption of food, poor dietary patterns and unbalanced diets. In these countries, improving health and nutritional wellbeing will require encouraging changes in dietary habits and lifestyles through sound and effective information and education. The challenge among these populations will be to devise policies and programmes in agriculture, education and health which will promote better nutritional status and prevent diet-related non-communicable diseases.

Agricultural policies must be oriented towards the effective and sustainable development of better food supplies, including the production, processing, distribution and effective marketing of all elements of an adequate and nutritionally balanced diet. Health policies must give specific attention to preventive activities, such as immunization, care for vulnerable groups and the effective treatment of diarrhoeal diseases. Both agriculture and health policies must stress the assurance of adequate food quality and safety throughout every segment of the food chain, from the point of production, through harvesting, storage, processing, preservation and marketing, with shared responsibility among primary producers, food handlers and consumers. Educational policies must assure adequate basic education for all, and include appropriate elements of nutrition education in elementary and secondary schools and for the mass media. Overall development policies must assure adequate access to good quality and safe foods at affordable prices.

Dr. Lupien is Director, Food and Nutrition Division, Food and Agriculture Organization of the United Nations.

FOOD SAFETY: ELUSIVE GOAL AND ESSENTIAL QUEST

DR. RICHARD L. HALL

Safety is simply the absence of risk. In our imperfect society in a probabilistic universe, risk can never be entirely absent. Therefore, the practical meaning of “safety” is that a particular risk, or group of risks, is at an acceptably low level.

It simplifies discussion of food risks to categorize them by shared characteristics of causation, impact and correction. Based on available data, by far the largest are microbiological and nutritional risks. Next are those from natural toxicants and environmental contaminants, and least are those from food additives and pesticide residues.

Two striking trends in outbreaks of foodborne illness have emerged in the last quarter century. First is the emergence of pathogens previously unknown, as well as newly-recognized pathogenic strains of organisms previously considered harmless. Second is a general increase in the incidence of foodborne disease.

Many sets of conditions lead to disease outbreaks:
- Clean water is essential for drinking, food processing and watering of livestock. Without safe water it is difficult to have safe food.
- Mishandling is pervasive. Inadequate refrigeration and cross-contamination are the most common problems. They tend to occur where trained personnel and quality control are lacking and that is why more than 90% of all US outbreaks of foodborne illness are due to mishandling of food in the home or in the service establishments. For the same reasons, street foods have received much attention throughout the world by national governments, FAO and WHO.
- Epidemics of former years spread slowly, consistent with the slow pace of the few people who traveled. Today people and foods travel widely, and at high speed. National borders are porous to disease - including foodborne disease, but they frequently are barriers to disease countermeasures, including the information that makes countermeasures both possible and effective.
- We are relaxing our standards. An example is our current infatuation with ‘minimally processed’ food. That is playing ‘chicken’ with pathogens, and the pathogens react faster than we do.
- We have more susceptible individuals, because of impaired immune systems.

It is no exaggeration to say that virtually every major social and economic change since (the turn of century) - urbanisation; increased economic opportunity; greatly increased travel; a highly varied and international food supply that is independent of season; human choices that stress, but do not kill bacteria; and more immunocompromised people, - all tend toward a higher incidence of an increasing wide range of foodborne diseases.

Fortunately, all is not black. Most foodborne illness could have been avoided completely had we simply done the things we have long known must be done. Prof. E.M. Foster summarizes them as “the three K’s” - Keep them out, Kill all you can, Keep the rest from growing.

- There is a broad range of new and newly applied techniques for food preservation. Food irradiation is gradually assuming more of a role as a generation of misapprehension begins to fade away.
- Aseptic packaging and controlled atmosphere storage and packaging are widely used in some countries, less so, as yet, in others. Ohmic heating, pulsed electric fields, competitive microbial inhibition, high-pressure processing, and bright light are novel technologies seeking their niches.
- Molecular biology, improvements in microbiological technology, and modern communications provide us with the opportunity for more prompt, focused and effective countermeasures. Rapid methods of bacterial DNA analysis permit tracing cases to a common source even in a diffuse outbreak. Genomics will let us learn more about bacteria, and at a faster pace.
- Many foodborne infections come from animal reservoirs, and that points directly to needed improvements in food production, harvest, and slaughter environments.

While communications between the various government agencies and industrial organizations potentially involved in a newly recognised outbreak have improved,
much more is needed. Bioinformatics will help us handle the greater volume and detail of information we will need to use.

- We require predesignated rapid response teams (RRTs), able to co-opt the particular expertise they need, and able to act quickly on a national and international level.
- We must have far wider application of HACCP (Hazard Analysis and Critical Control Points) to all links in the food chain.
- Trade in food is world-wide. Increased safety for the wealthier countries lies in economic growth and improved infrastructure in the developing countries.

The current levels of risk from food additives and pesticide residues are low because of the past effort devoted to their evaluation and control, and because they normally are used by persons expert in their use. The microbiological and nutritional risks are high because they depend heavily on how consumers choose, use and abuse their food, and all consumers are not expert.

There can be no absolute guarantee of safety under all conceivable circumstances. Highly distorted diets may produce not only nutritional imbalances, but also some degree of toxicity from either naturally occurring constituents or from intentionally added ingredients. Allergies and other idiosyncratic reactions to particular food constituents occur. Rare adverse reactions are difficult to trace to a cause and thus difficult to avoid.

Our food supply and its safety form a complex web. Fortunately the principles important in controlling it are simple - not ABC, but the three K’s. There are also three words - Sanitation, Variety and Moderation, that deal effectively with microbiological and nutritional risks. They are the two largest risks, and they are primarily within our individual control.

Editor’s note: Dr. Hall, IUFoST past president, was chosen by IUFoST select committee to give the Founders’ Lecture to Congress X. The full text of Dr. Hall’s Founders’ Lecture and Dr. Lupien’s Keynote Address will be published in ‘Food Australia’, December issue (vol.51 (12)), and also will be available through the ‘Food Australia’ website at www.foodaust.com.au

CONGRESS X: A STUDENT PERSPECTIVE

DANIEL OBED OTIENO, KENYA

Before I left Sydney and the continent down under, I had the opportunity to revisit Darling Harbour and sit relaxed in the halls of the Sydney Convention and Exhibition Centre, the venue for the congress, to recap the events of Congress week. Over 3,000 delegates and exhibitors from all over the world attended this historic congress.

There is a growing feeling among student food scientists that IUFoST is becoming increasingly sensitive to their needs and that IUFoST members are collaborating even more with the world body to support student activities. Perhaps the best part of IUFoST’s work from a student’s perspective has been the creation of an award scheme for outstanding Food Science and Technology students to win fellowships to the IUFoST congresses. The proud recipients of these fellowships for Congress X were 17 students from all over the world. On behalf of the fellow-ship winners, may I thank IUFoST and the Australian Institute of Food Science and Technology Inc., (AIFST) once again for their timely and generous support.

In a world that is advancing fast in food science, yet threatened with population explosion and in a world where there is glaring imbalance in food industry development between the developing and the developed world, and in a world that is diverse with various eating cultures and habits, it was fitting that the congress theme was ‘An Integrated and Value added Agri-Food Chain in a Global Food Industry’. The various innovations from agriculture, post-harvest management, processing, safety and value adding, packaging, distribution, trade and related regulatory issues on a world level packed the plenary lectures and discussions.

Food science and technology is such a broad based discipline that the chance a speaker would present something completely unknown, backed by scientific application, was not unusual but a normal occurrence throughout the congress. This placed everyone in the role of student.

The advancement in scientific research and its application to meet the complex and diverse needs of the consumer market is confounding. New developments, discoveries, breakthroughs, even more familiar subjects of concern to all, food safety for example, were presented with such intellectual depth, that even the experts present were making enquiries. Being confronted with new technologies, products and insights into future trends challenged everyone.

There are tremendous opportunities for students to pursue research in all these areas, to continue investigating, what is more relevant to them. Given the disparity in the needs of consumers in the developing and the developed world, the challenge is to do research that is most relevant to the needs of the given region. In Africa, for example, the overriding need is for increased food production, value adding in processing, as well as the diversification of African staples.

A student, researcher, or African institution is often preoccupied with more basic needs than subjects such as the genetic modification of foods that are not indigenous. Such advancements in research are necessary in the more developed world, where the food industry is experiencing completely different challenges from a more informed and critical consumer. They (scientists in the developed world) can safely venture into those areas as pioneers and when the demands of food in the developing world match up to those needs in the future, we will follow suit. Even now, it is useful for the developing world to acquaint themselves with these new emerging technologies, while not practising them at a commercial level.

Another area in the Congress theme that needs to be further explored is the globalisation of the food industry in terms of trade and investments. There seems to be a super-highway linking the developed world with regards to technology transfer and services, investments in industry and food trade, sharply contrasted by an unfortunate “leap over” of the developing world. The justification has
always been poorer investment climate and limited business opportunities in the developing world but the fundamental issue still remains untackled.

The developing world is developing faster now. Population growth is creating the need for faster food production and investment in faster food processing technologies. People are becoming better educated, hence the increasing accuracy with which they diagnose problems and find solutions. It is a case of competing with dire realities and there is no option other than to progress more quickly. All people are basically the same. They feel hungry, thirsty, have taste for food whenever they must eat. Therefore increased trade is essential and not just in shipping food, but investing by transferring technologies and services, or even adopting well-tested technologies to meet specific challenges. This is particularly important in a continent that is famine prone and ravaged by food and nutritional insecurity.

It is an important challenge for the food scientist in the developing world to gain access to the same opportunities and potential investment as those of a scientist in the developed world. Food science and technology then becomes an engine of growth and development throughout the world.

Finally, the student needs to be continually motivated in the institutions where they work and study, the food industries within their national boundaries and even beyond. Research is daunting, particularly for the student. Students need encouragement and ample room to put all their ingenuity to work to realise meaningful achievements. Then they need to share all these findings through available forums. Where this has been done tremendous results have been witnessed. Where this hasn’t, it begs to be done.

Congress X was a great success and in many ways realised its noble objectives. Congratulations to the Australian organising committee and IUFoST.

Editor’s note: Daniel Obed Otieno was awarded an IUFoST Student Fellowship to attend Congress X in Sydney, Australia

Thank You

IUFoST wishes to thank our Australian Adhering Body, The Australian Institute of Food Science and Technology Inc. (AIFST), for their magnificent job in organising Congress X, under the chairmanship of Alan Mortimer.

PROFILE: PROF. FRANCO M. LAJOLO

Franco M. Lajolo of Brazil, a new member of the IUFoST Governing Council, obtained his B.Sc. degree in Pharmacy and Biochemistry at São Paulo University in 1965, and his Ph.D in Food Biochemistry in 1968. The following year he began a two-year post-doctorate at the Massachusetts Institute of Technology (MIT) in the USA where, as a research associate in Food Science, he investigated the effect of water activity on the mechanism of chemical reaction in foods.

When he returned to Brazil, Franco joined the Dept of Food Science and Experimental Nutrition faculty of São Paulo University. Since that time Franco has played a very active role in setting up undergraduate and graduate courses in Food Science and in developing a strong research program in Food Science and Nutrition. During the past 15 years he has held several positions within the central administration of São Paulo University. His posts have included Dean of the School of Pharmaceutical Science, Vice-Rector for Post-Graduate students and Member, Higher Council of the University.

Franco has been a committee member of many institutions including the National Research Council, the Brazilian Ministry of Health Food Regulation Group, and International Life Science Institute Council. He has also participated in Ministry of Education and Ministry of Science and Technology committees to develop research policies for Food Science and Technology and graduate education in Brazil.

In the Brazilian Society of Food Science and Technology (SBCTA), Franco’s life has been very intense. He served for several years as Secretary, Vice-President and Director of the publication he founded titled ‘Ciência e Tecnologia de Alimentos’. During the past four years Franco has been President of the Brazilian association. His activities with SBCTA also included the organisation of many national and international congresses, courses, and publications. As a result, SBCTA has been established as the most important Food Science and Technology organisation in the country.

With a B.Sc in Pharmacy and Biochemistry and a Ph.D in Food Biochemistry, his main research areas associated chemistry and biology, covering studies on protein characterization and utilization in vivo, mechanisms of chemical reactions in food and its nutritional consequence, biochemical and molecular biology of fruit quality, food consumption database, anti-nutritional factors and, more recently, functional foods. He has advised 52 M.Sc and Ph.D students who are now working in several Brazilian universities and in other countries in Latin America. Most have reached high positions in academia, government or industry.

At present, Franco is Head, Dept of Food Science and Experimental Nutrition at São Paulo University and leader of a research group in Food Biochemistry, running several (cont’d page 8)
## 1999

### NOVEMBER 21-23
- Int'l Conf. on Processed Food for the 21st Century, Calcutta, India. Contact: Dr. Pratap Chakraborty, Tel: +91 334725822, Fax: +91 334725822, e-mail: jufbte@Cal2.vsnl.net.in

### NOVEMBER 22-24
- European Conf. on Emerging Food Sci. and Tech., Tampere, Finland. Contact: Annabelle Le Rohellec, Tel: +31 317 477538, Fax: +31 317 475347, e-mail: effost@ato.dlo.nl

### NOVEMBER 24-25
- Food Hygiene’99, Surrey, UK. Contact: Fiona Angus, Tel: +44 1372 822217, Fax: +44 1372 822272, e-mail: fangus@ifra.co.uk

### DECEMBER 8-10
- 2nd European Symposium on Enzymes in Grain Processing, Helsinki, Finland. A joint initiative of the VTT Biotechnology and Food Research, Finland and the TNO Nutrition and Food Research Inst., The Netherlands. Contact: Taina Simoinen, VTT Biotechnology and Food Research, P.O.Box 1500, FI-02044 VTT, Finland. Tel: +358 9 456 4449, Fax: +358 9 455 2028, e-mail: taina.simoinen@vtt.fi

### JANUARY 19-21
- 6th European Conf. Food-Industry and Statistics, Fau, France. Contact: Congrés Agro-Industrie et Méthodes Statistiques, Laboratoire de Mathématiques Appliquées, Univ. de Pau et des Pays de l’Adour, Ave. de l’université - 64000 Pau. Tel: +33 559 92 3034, Fax: +33 559 92 3200, e-mail: agrostat@univ-pau.fr

### JANUARY 27-29
- World Spice Congress, Oberoi Towers, Mumbai, India. Contact: Organising Secretary, World Spice Congress 2000, Spices Board, PO Box 2277, Cochinn-682 025, India. Tel: +91 44 333608, Fax: +91 44 331 429, e-mail: spccboard@vsnl.com

### FEBRUARY 29-MARCH 2
- IDF Symposium on Cheese Ripening and Technology, Banff, Canada. Contact: Prof. Paul Jelen, Dept. of Agriculture, Food & Nutritional Science, Univ. of Alberta, 2-06 Agfor Centre, Edmonton, AB T6G 2P5, Canada. Tel: +1 403 492 2480, Fax: +1 403 492 8914, e-mail: pjelen@afns.ualberta.ca

### MARCH 13-16
- IDF Symposium on Cheese Ripening and Technology, Banff, Canada. Contact: Prof. Paul Jelen, Dept. of Agriculture, Food & Nutritional Science, Univ. of Alberta, 2-06 Agfor Centre, Edmonton, AB T6G 2P5, Canada. Tel: +1 403 492 2480, Fax: +1 403 492 8914, e-mail: pjelen@afns.ualberta.ca

### MARCH 17-18
- 7th Int’l Congress on Food Science & Tech. (CICITA-7), Havana, Cuba. Contact: Dr. Jesús Yáñez Querejeta, Carretera Guatao km 31/2, Lisa, Havana, Cuba. Tel: +537 220588, Fax: +537 246553, e-mail: minalvml@ceniai.inf.cu

### APRIL 5-7
- Food Ingredients Asia 2000, Shanghai, China. Contact: Miller Freeman BV, Tel: +31 346 559444, Fax: +31 346 573811, e-mail: exponl@ibm.net

### APRIL 6-7
- 1st International Workshop on Water Determination in Food, Ispra, Italy. Contact: Prof. Dr. E. Ankiam, European Commission, DG Joint Research Centre, Inst. for Health and Consumer Protection, Food Products and Consumer Goods Unit, 1-21202 Ispra, Italy; Tel: +39 0332 785 390. Fax: +39 0332 785 930, e-mail: elke.anklam@jrc.it

### APRIL 9-13
- ICEF 8, Int’l. Congress on Engineering and Food, Puebla, Mexico. Contact Dr. Jorge Welti Chanes, Universidad de las Americas-Puebla, Sta. Catarina Martir, Cholula, Puebla, 72820 México Tel:+52 2229 2005; Fax:+52 2229 2009; e-mail: jwelti@mail.udlap.mx

### APRIL 12-15
- The Third International Congress of Nutrition and Dietetics (ICND ’2000), jointly organized by the Dept. of Nutrition and Dietetics of Hacettepe Univ., Ankara, Turkey. Contact: P. Arslan, Tel: +90 312 4420700, Fax: +90 312 4407799, e-mail: flaftour@flaptour.com.tr

### APRIL 13-14
- Symposium on the Development Strategy for the Sheep and Goat Dairy Sector, Nicosia, Cyprus. Contact: Mr. G. Psathas, 39, Dem. Severis Ave., P.O.Box 22418, 1521, Nicosia, Cyprus. Fax: +357 667313, e-mail: cmio@cytanet.com.cy

### MAY 9-11
- Food Ingredients (FI) Central and Eastern Europe. Warsaw, Poland. Contact Miller Freeman BV, P.O. Box 200, 3600 AE Maasssen, The Netherlands Tel: +31-346-559444; +31-346-573811; e-mail: SBrandt@unmf.com; website: www.fmbv.com/food.

### MAY 9-12
- XI Latinoamerican, The Caribbean Seminar and the XIII National Congress of Food Sci. & Tech., Santiago, Chili. Contact: Dr. Jorge Silva, Pres. Seminar 2000, Tel: +56 2 682 2554, Fax: +56 2 682 1752, e-mail: socital@lauxa.usach.cl

### MAY 15-17
- IXth Int’l Symposium on Luminescence Spectrometry in Biomedical & Environmental Analysis - Spectroscopic & Imaging Detection Techniques, Montpellier, France. Contact: Prof. Dr. Dan A. Lerner, Univ. of Montpellier Ecole Nationale Supérieure de Chimie 8, Rue de l’Ecole Normale, F-34296 Montpellier Cedex 5, France. Tel: +33 04 67144323, Fax: +33 04 67144349, e-mail: lerner@enscm.fr

### MAY 15-18
- Bio.Ed.2000: the Challenge of the 21st Century, Paris, France. Contact: Dr. F.C. Vohra, Sec.Gen. IUBS-CBE, 51, Boulevard de Montmorency, P.O.Box 22418, 1521, Nicosia, Cyprus. Fax: +357 667313, e-mail: cmio@cytanet.com.cy
EVENTS OF INTEREST

JUNE 7-9  Developing & Marketing Future Foods, The Challenge of Communication, Helsinki, Finland. Contact: VTT, Biotechnology and Food Research, Ms Paula Bergqvist, P.O. Box 1500 FIN-02044 VTT, Finland. Tel: +358 9 456 5161, Fax: +358 9 455 2103, e-mail: paula.bergqvist@vtt.fi

JUNE 10-14  Institute of Food Technologists (IFT) Annual Meeting, Dallas Convention Center, Dallas, Texas, USA. Contact: Ms. Angela Lansbury, IFT, 221 N. LaSalle Street, Suite 300, Chicago, Illinois, USA 60601-1291. Tel: +1 312 782 8424, Fax: +1 312 782 8348, e-mail: aldansby@ift.org

JUNE 14-18  Challenges for Science & Engineering in the 21st Century, Stockholm, Sweden. Contact: INES 2000 Conf. Secretariat, Gutenbergstr. 31, 44139 Dortmund, Germany. Tel: +49 231 575218, Fax: +49 231 575210, e-mail: INES2000@t-online.de

JULY 6-14  Twentieth Anniversary Gala Workshop on Rapid Methods & Automation in Microbiology, Kansas State Univ. Contact: Daniel Y.C. Fung, Director, Dept. of Animal Sci. & Industry, 139 Call Hall, Manhattan, Kansas 66506-1600, USA. Tel: +1 785 532 5654, Fax: +1 785 532 5681, e-mail: dfung@oz.oznet.ksu.edu

JULY 10-12  2nd International Symposium on Sequencing Batch Reactor Technology, Narbonne, France. Contact: INRA-LBE, attn. Drs. JP Delgenès & M. Torrijos, Avenue des Etangs 11100 Narbonne, France. Fax: +33 468 42 51 60, e-mail: sbr2000@ensam.inra.fr

JULY 28-31  9th Food Choice Conference, Trinity College, University of Dublin, Dublin, Ireland. Contact: e-mail: D.Trinder@Bham.ac.uk

SEPTEMBER 10-14  114th AOAC Int’l Annual Mtg. and Exhibition, Philadelphia, Pennsylvania, USA. Contact: Carolyn Dell, AOAC Int’l, 481 North Frederick Ave. Suite 500, Gaithersburg, MD 20877, USA. Tel: +1 301 9247077, e-mail: meetings@aoc.org

SEPTEMBER 14-17  International Conference and Exhibition on Nutraceuticals and Functional Foods, Houston, Texas, USA. Contact: Prof. Fereidoon Shahidi, Memorial University of Newfoundland, St. John’s, Newfoundland, Canada, A1B 3X9. Tel: +1 709 737 8552, Fax: +1 709 737 4000, e-mail: fshahidi@morgan.ucs.mun.ca

SEPTEMBER 16-21  ISOPOW 2000: Water Science for Food, Health, Agriculture and Environment, Israel. Contact: H. Shklarsky, Tel: +972 4 8294464, Fax: +972 4 8236022, e-mail: isopow@tx.technion.ac.il

2001

11TH WORLD CONGRESS

Korea is the venue for East to meet West at the 11th World Congress. With a history of more than 5000 years, Korea is now a world economy and Seoul, the capital city of Korea for more than 600 years, has a diverse population of 11 million people.

Plan now to attend Congress XI to be held on April 22-27, 2001 in Seoul, Korea. The Congress Organizing Committee are working very hard to provide you with an excellent opportunity to share in the latest technical knowledge in an atmosphere of old world culture. The theme of the congress is ‘Paradigm Shift – Harmonization of the Eastern and Western Food Systems’. The program will cover such diverse topics as food biotechnology, Asian foods, functional foods and food safety. Poster presentations, round table discussions and short courses will round out the Congress.

The deadline for abstract submissions is September 2000. To receive more information on the Congress contact the Congress Secretariat at the Korean Society of Food Science & Technology, 635-4 Yeoksam-Dong, Kangnam-Ku, Seoul 135-703, Korea. e-mail: kosfost@mail.kosfost.or.kr, website: www.congress2001.or.kr.
WHO CONSULTATION ON THE DEVELOPMENT OF A STRATEGY FOR IMPLEMENTATION OF HACCP IN SMALL OR LESS DEVELOPED BUSINESSES

DR. M. VAN SCHOTHORST

The World Health Organisation (WHO) convened this Consultation in collaboration with the Ministry of Health, Welfare and Sports, the Netherlands. The Consultation took place in The Hague, The Netherlands, from 16-19 June 1999 and had 30 participants.

A large proportion of food enterprises are small businesses, and they are responsible for the major share of the human food consumption. Many of them lack an adequate food safety management programme and have experienced difficulties in applying the HACCP system as described in the Codex Guidelines on the subject. However, Public Health officials recommend applying the seven HACCP principles as a basic requirement for the production or preparation of safe food, regardless the size or the level of development of a food business.

The objectives of the Consultation were to:
- review the difficulties experienced when applying the HACCP system in small industries;
- review the initiatives and approaches taken by different governments or sectors in assisting small businesses in implementing HACCP;
- define the role of governments, enforcement agencies and professional trade bodies in assisting small businesses in implementing HACCP;
- develop a strategy for implementing HACCP in small businesses, considering different practical options.

OUTCOME OF THE MEETING

The Consultation agreed to define “small or less developed business (SLAB)” as “businesses that either because of their size, lack of technical and/or economic resources, or the nature of their work have difficulty/problems in implementing the HACCP system”. The term “less developed business” refers to the status of its food safety management programme and not the number of staff or production volume. The Consultation targeted mainly businesses that produce or process foods for domestic markets and considered problems and initiatives taken in both industrialised and developing countries.

After listing a number of benefits of HACCP, the consultation reviewed the following barriers to its implementation, and recommended strategies to overcome them:
- lack of government commitment
- lack of customer and business demand
- absence of legal requirements
- cost considerations
- human resource constraints
- lack of technical support
- inadequate infrastructure and facilities
- inadequate communications

The consultation recognised that many countries have developed sector-specific industry guides, which play an important role in improving food safety and helping businesses implement HACCP. In many countries they have been developed in a co-ordinated way involving all stakeholders such as business operators, trade associations, regulatory agencies and consumer groups. Guides are also proving useful for other reasons. They provide practical assistance to food industry sectors in complying with legal requirements on food safety, including HACCP requirements. Trade associations also use them to improve the standard of food safety and promote increased public confidence in their products. Guides can also form the basis of a common understanding between specific food sectors and the regulatory authorities on the application of legislation and practical HACCP controls. One major advantage of developing a guide to applying HACCP in small businesses is that it can improve operators’ knowledge and understanding of the risks associated with their products, give them practical advice on how to control these risks and thereby enhance their safety. A guide will help minimise the burden of instituting a HACCP system and the advice is made available at a relatively low cost.

For these reasons the Consultation recommended the development of sector specific guides because they will assist in overcoming some of the barriers to the use and implementation of HACCP and can help the communication process.

The report of the Consultation is expected to provide guidance concerning:
- Essential Considerations when drawing up a Guide
- Recommended Contents of a Guide
- Documentation and Records
- Managing the Development Process
- Official Approval and Evaluation
- Making use of the Guides, and
- Generic HACCP Plans,

NB. It was considered that for small business a generic HACCP plan may form a useful starting point. Generic plans are examples of HACCP plans developed for a food commodity of process that may be used as guidance for business operators producing such commodities or using such processes. Generic plans are not appropriate for use until customised for a specific food or food process.

The Consultation proposed an adaptation of the existing Codex Guidelines on the Application of HACCP that should be suitable for the situation of SLDB’S: “Guidelines for the application of the HACCP system to small and less developed businesses”. The text recognises, amongst other things, that expertise may not be available in-house and that the use of outside experts, generic plans, sector specific guides etc. may be necessary in implementing the seven HACCP principles.

The outcome of this Consultation will help promote a flexible implementation of HACCP, without compromising the seven principles and losing the benefits of its
structured and knowledge-based approach.

Editor's Note: Dr. van Schothorst represented IUFoST at this meeting.

**NEWS FROM TAIWAN**

**DR. ROBIN Y.-Y. CHIOU**

**CIFST CORRESPONDENT**

A forum titled ‘Technology innovation of the Oriental foods’, sponsored by the Food Industrial Research and Development Institute (FIRDI) (Hsinchu, Taiwan) and the Chinese Academy of Engineering (CAE) (Beijing, Mainland China), was held at the Chinese Hall of Science and Technology, Beijing, from August 16 to 20, 1999. The forum was co-sponsored by both Chinese Institutes of Food Science and Technology (CIFST) across Taiwan Strait.

The 14-member group including invited scientists from universities, specialists from R & D institutes and industrial representatives led by Dr. T.-Y. Liu, Director of FIRDI and Mr. C.-L. Chang, President of CIFST (Taiwan), arrived in Beijing on August 16, 1999. The opening ceremony was chaired by Prof. K.-F. Shen, Vice-President of CAE and remarks were made by Dr. T.-Y. Liu and Dr. L.-S. Lu, member of CAE and President of the State Food and Consultative Commission. This forum was a continuation of activity that began in March 1997 when Prof. L.-S. Lu and four other delegates visited FIRDI as well as other related institutions and industries in Taiwan.

The theme of the forum was ‘Innovation of Oriental foods in particular based on the cultural heritage of Chinese foods’. In the convention following, six sections were scheduled to cover, in the broadest sense, almost all aspects of interest. Specialized topics including agricultural economy, agricultural policy, people nutrition and health, production and utilization of soybean and rice, development of novel soybean products, textured vegetable foods, fishery resource and related product development, use and characteristics of *Monascus* pigments, peanut processing and quality enhancement, unique traditional fermented foods, strategy and management of food business, lactic acid fermentation of soybean milk for diet supplementation in the rural areas, fruit production and juice processing, possible uses of herbs as food ingredients, and current status and potential development of health foods were presented and extensively discussed.

The forum was successful in achieving an in-depth mutual understanding of the current food status, exchange of ideas and experience and further collaboration in food technology and related business. In addition to the forum, field trips to visit food industry facilities in Beijing and some special sightseeing spots were impressive for all participants.

**NEWS FROM ITALY**

**DR. SEBASTIANO PORRETTA**, AATA

The Italian Association of Food Technology (AATA), an IUFoST member since its inception in 1979, is celebrating its 20th Anniversary this year. A special ceremony in the presence of the President of Italian Food Industries was held in Parma during the ‘Strategic functions of food industries in the third millennium’ conference of October 1999.

For the anniversary, a medal was struck and given to supporting industries, promoting members and the directive council. A personalized medal was also dedicated to IUFoST.

One of AITA’s main aims in the next millennium is to improve collaboration among Food Science and Technology associations across Europe. To that end, AITA is organising the second International Symposium on Food Safety in December 1999. Representatives of the European food associations are invited to lecture.

**FOOD 21 AND FOOD CHAIN 21-AN INTERDISCIPLINARY SWEDISH RESEARCH PROGRAM FOR SUSTAINABLE FOOD PRODUCTION**

**PROF. NILS BENGTSON**

The Swedish Foundation for Strategic Environmental Research (MISTRA) funds this research, now in its third year, by a grant of 58 million SEK (approx. US$7 million) for 1997-2000. The program involves about 100 senior researchers and some 30 doctorate workers at five Swedish universities and other research centres, such as at SIK.

The overall long-term goal of the program is to define optimal conditions for sustainable food production that generates high quality food products. The interdisciplinary aspects are of central importance for research that should lead to change of whole systems and radically lowered influence on the environment. At the same time, the results should strengthen the competitiveness of Swedish food products and Swedish farmers, making maintained high productivity and high product quality a possibility.

The program is divided into the following five projects:

- crop production
- animal production
- product quality
- consumer and farmer
- system analysis

A brief outline of two of these projects, as cited from the program home page at http://www-mat21.slu.se/food21.html, runs as follows:

Change in agricultural production systems as a consequence of environmental concerns, ethics and animal welfare may result in a number of effects on food quality. In the project for product quality, sustainably produced foods will have to be evaluated for changes in quality characteristics, since maintenance of high quality is a prerequisite for the successful introduction of sustainable production systems. Not only sensory qualities but also nutritional, technological and toxicological characteristics will be studied.

Consumer and farmer studies are performed on factors that influence consumers to change their food purchasing habits and their role as environmental agents. What circumstances lead to changes in consumer habits? What is the role of supermarket layout and food labelling? What characterises the process of behavioural change?
System analysis is a valuable tool in determining how farms meet important sustainable goals, with respect to impact on the environment and use of resources. One important method in such system analysis is the use of Life Cycle Analysis, LCA.

In 1998, a satellite program, called Food Chain 21, was initiated in co-operation with SIK, extending environmental effects also to the later steps of the food chain; food industry, distribution and trade up to the consumer. The work at SIK comprises one project on the LCA of specific food materials such as meat, and one project on the simulation of a logistic flow in the food chain and environmental optimisation. SIK is also involved in LCA studies on meat and milk for the farmer’s organisation, to be linked to the Food Chain program (SIK has long experience in LCA in the food system, being pioneers in food field applications in Sweden and co-ordinator of a European LCA network on foods, http://www.sik.se/affomr/miljo/ikanet.html).

In a program of such a wide scope as the Food 21, synthesis of knowledge developed in the program and elsewhere plays a central role, and engages a special synthesis group. Their work proceeds continuously, with the aim to successively clarify the desired characteristics of sustainable agriculture in a system in which all links of the food chain play an important role. The synthesis strives to analyse from a holistic perspective rather than by analysing the separate parts in isolation.

While the present funding of the programs expires next year, plans are already in place to extend them for another four years.

Prof. Bengtson is Senior Advisor to SIK, The Swedish Institute for Food and Biotechnology.

NEWS FROM JAPAN

A fundamental law affecting science and technology in Japan took effect in 1995 with the establishment of a statement on the basis of creative science and technology. According to this law, the government must draw up a 5-year plan for science and technology with 10-year prospects. The plan includes funds for ordinary diverse research in a wide range of fields to obtain a future stock of knowledge, and funds for advanced and target-oriented research in especially selected important fields, to be beneficial in the near future.

Following the issue of this plan, Ministry of Education, Ministry of International Trade and Industry, Agency of Science and Technology, Ministry of Agriculture, Forestry and Fishery (MAFF), Ministry of Health and Welfare and their related agencies started in 1996 to fund large-scale subsidies for research of the latter, short-term, type.

An agency related to MAFF, the Bio-oriented Technology Research Advancement Institution (BRAIN), also called for project proposals in five categories: (1) Clarification of biological function and increasing the efficiency of production; (2) Food of high functionality and high quality; (3) Biomaterials; (4) Improvement of environment by utilizing biological function; (5) Common fundamental research.

For each project, the fund lasts for 3 to 5 years with evaluation in every year with the total amount roughly 300 million dollars or more including expenditure for equipment, consumption goods, and salary for post doctoral fellows.

The following are the titles and representatives of those projects adopted in category 2 related directly to food:

1996 (starting year of project)

Project for cancer prevention by citrus — Dr. Masamitsu Yano, National Research Institute of Fruit Tree Sciences, MAFF

Basic research for molecular breeding and utilization of crops accumulating physiologically functional proteins — Prof. Shigeru Utsumi, Research Institute for Food Science, Kyoto University

Screening and analysis for novel physiological and pharmacological function of tea — Dr. Katsuhiro Hakamada, National Research Institute of Vegetables, Ornamental Plants and Tea, MAFF

Analysis of molecular mechanisms in taste signaling and development of basis for food quality design — Prof. Keiko Abe, Graduate School of Agricultural and Life Sciences, The University of Tokyo

1997

Molecular biological studies of digestive tract for designing foods — Prof. Tadashi Noguchi, Graduate School of Agricultural and Life Sciences, The University of Tokyo

Studies on protective role of food phytochemicals in oxidative stress — Prof. Toshihiko Osawa, Graduate School of Bioscencial Sciences, Nagoya University

1998

Fundamental study on development of food materials composed of lipids with high functionality — Prof. Ryuichi Matsuno, Graduate School of Agriculture, Kyoto University

1999

Molecular mechanisms for the regulation of energy metabolism and adipocyte functions: Implication for dietary control of obesity — Prof. Masayuki Saito, Graduate School of Veterinary Medicine, Hokkaido University

Molecular basis for taste response : Taste cell and nervous system — Dr. Akihiro Hino, National Food Research Institute, MAFF

NEWS FROM INDIA

Food Engineering Centre: A state-of-the-art Food Engineering centre, set up by the Central Food Technological Research Institute (CFTRI) in Mysore, was inaugurated by Sri P.S. Bhutanagar, IAS, Secretary of the Ministry of Food Processing Industries, Government of India on 26 September 1999.

The facility is intended to cater to the training, designing and engineering needs of the Indian food processing industry, especially in the following terms:

• Techno-economic assessment of processes, product and plant designs/profiles, and their optimization through rigorous pilot plant and other engineering studies;
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- Assistance in test marketing of new products by serving as a production center during implementation stages of the products by the new industries;
- Training of operators, technologists and engineers in plant operation, maintenance and trouble shooting in food processing plants;
- Designing new machinery and equipment with the participation of the design center and prototype fabrication shops;
- Creation of database and providing information to the industry on physical, thermal, chemical and engineering properties of raw materials, ingredients and finished food products;
- Pilot processing facility to the existing and proposed food industries to facilitate the decision making for selection of suitable machinery;
- Engineering consultancy to the industry for preparation of project reports and other techno-economic reports for setting up of new plants on a turnkey basis in collaboration with other engineering firms.

The Centre has been established with the financial assistance of the Ministry of Food Processing Industries, Government of India and Council of Scientific and Industrial Research, New Delhi.

Golden Jubilee Celebration: The Central Food Technological Research Institute, which was established in 1950 will have completed 50 years of service next year and the celebrations have already begun. During Foundation Day ceremonies on 26 September 1999, Dr. V. Prakash, CFTRI Director, outlined the special educational programmes planned for the coming year.

FOOD CONTROL IN SOUTH AFRICA

AUBREY PARSONS, CORRESPONDENT

For the past fifty years, two major departments, Health and Agriculture, have shared food legislation and regulations in South Africa. This has functioned with reasonable success. However, there have been times when clear direction did not surface and the result was a confused food industry caught in the middle and unable, for example, to proceed with a new product launch because the two departments could not agree.

The good news is that this will all change dramatically when these two divisions merge very shortly. The new department will be known as “Food Control South Africa”. This major development is eagerly awaited by all of us who have worked extremely hard to achieve such a result. The two respective government departments are now just as eager to make it happen.

The hot topic of the year in South Africa is undoubtedly Genetically Modified Organisms (GMOs) as well as Genetically Modified Foods and Crops. We have made headway in certain areas and there is much still on the drawing board. However, even with a well-respected team of scientists guiding the research, there is an equally dedicated group determined to upset and ultimately stop the work with GMOs.

At a recent scientific meeting in which the various lobby groups were invited to participate, I am pleased to report that scientific sanity prevailed after a long and arduous day and the South African food industry went home extremely satisfied with the results. Needless to say, we still have a long journey uphill before we have a crystal clear horizon, but we will get there.

Among the areas the Food Control department will be involved in are: caffeine in sport beverages, aflatoxin in peanuts, pesticide residues, microbial standards for bottled water, colorants in sausages, latex allergies, control of listeria in various foods, lacto peroxidase in milk, methanol in alcoholic beverages.

I am convinced that our new Food Control department, in conjunction with local food industry leaders, will function as a team of experts with identical goals and where together we will ensure a consistently safe food supply for the benefit of consumers.

NEWS FROM TURKEY

ASSOC. PROF. SEMIH OTLES CORRESPONDENT

Following the success of the First (Hungary 1994), the Second (Romania 1996), the Third (Poland 1998) International Conferences, the Fourth International Conference on Agro and Food Physics (IAFP 2000) will be held on May 16-20, 2000 in Istanbul, Turkey. It is jointly organized by the International Society of Food Physicists (ISFP) founded in 1992 in Budapest and three Turkish Universities (Ege, Hacettepe and I.T.U) of food engineering.

The organizers of the ICPAFP 2000 will welcome original papers dealing with any aspect of agro and food physics. The eight working groups chosen to cover the areas of interest are: Rheology of foodstuff; Foodstuff radioactivity, radiation methods; Non-destructive physical methods (e.g. NIR-NIT, NMR, INAA); Physical methods (e.g. heating, microwaving, irradiation) in food processing; Basic questions in food physics (e.g. history, theoretical background, connection to other sciences); Physical properties of plant material and agroproducts; Technical development, instrumentation, measurement techniques, automation and process control; Other topics on agro and food products.

For further information on ICPAFP 2000, contact I. Saldamli, tel: + 90 3122977100/3122971111, Fax: + 90 3122354314/3122992123, e-mail: ilbilge@eti.cc.hun.edu.tr or the website at: http://www.kongre.net

WORLD FOOD PRIZE

D R. W A L T E R

Plowright has been awarded the 1999 World Food Prize for his development of a vaccine which will lead to the elimination of rinderpest from many parts of the developing world.

Based in Kenya, Dr. Plowright has spent over 20 years researching and developing a safe and effective rinderpest vaccine. Rinderpest, commonly known as cattle plague was, until Dr. Plowright’s discovery, one of the deadliest animal diseases in recorded history, causing the death of millions of cows, widespread famine, huge economic losses, social and political unrest. Development of the vaccine has contributed to both food and income resources for hundreds of thousands of small farms throughout the world, and the diminishment of socio-political upheaval caused by scarce or perishing food sources.
Executive Meeting, Melbourne

Two days of intensive meetings resulted in considerable achievement. Members of the IUFoST Executive Committee 1995-1999 met with incoming members of the new Governing Council to translate the strategic plan and constitution into concrete and achievable plans of action. Professor Ing. Walter Spiess was elected to the position of President-Elect under the new Governing Council and the others elected under the old Executive system were assigned positions according to the new Governing Council.

Constitutional amendments were prepared for General Assembly ratification reflecting the transitional nature of the next two years. These amendments which were duly ratified by the General Assembly were:

**Governance Structure Resolution:**

“That the individuals elected to the Executive Committee be re-assigned to the new organisation structure as follows:

**Past President — P. Biacs (Hungary)**

**President — L. Marovatsanga (Zimbabwe)**

**President-Elect — W. Spiess (Germany)**

**Secretary-General/Treasurer — J. Meech (Canada)**

**Scientific Council — D. Lineback (USA) Chair, G. Campbell Platt (UK), F. Escher (Switzerland), T-W. Kwon (Korea), F. Lajolo (Brazil), K. Martensson (Sweden), E. Mendez (Mexico), A. Mortimer (Australia), F. Winarno (Indonesia)**

And noting that the above will be performing the roles and accepting the implied responsibilities of these positions although not formally holding these positions. Those performing the roles in 1999-2001 have no right of succession.”

Professor Ing. Walter Spiess was given the responsibilities of President-elect, one of which was to act for the President as required during her illness. Lilian’s tragic death means that there is now a need to elect a new President, according to the Constitution, which states that an election be held within the Governing Council. The Past-President, Professor Peter Biacs is ensuring that the election is held quickly and according to our rules. He has already initiated the appropriate procedures, and although it is still too early to tell you the result, we are confident that in a short period of time the result can be publicised.

In the meantime, Walter Spiess continues (according to the Constitution) to efficiently fulfil the responsibilities of the President-elect and the management of IUFoST and the various actions associated with implementation of its new structure and strategic plan are proceeding in an effective manner.

**Resolution on Fee Structure**

“1) That the full new fee structure apply from 2003 and that for 2001/2, fifty percent (50%) of any additional fees due for any country be waived upon request to the Management Committee. and 2) That countries for which the new fee is lower than the existing fee continue to pay the existing fee for 2001 and 2002 and their fee for 2003 shall be the mean of their old fee and their fee calculated according to the new constitution and 3) that the minimum fee be $300 and that rounding up of all fees to the next $100 be applied from and including 2003.”

**General Assembly**

The General Assembly approved both resolutions and ratified the new Strategic Plan and Constitution. IUFoST’s mission is to be the leading international agency in developing and facilitating co-operative arrangements that bring sought-after services to adhering bodies, their members and other food sector constituencies in different countries, thereby equipping them to maximise the benefits of food science and technology to humanity.

The new Governing Council was instructed to move forward with implementation of the Strategic Plan focusing on the following key elements:

- Provision of services not provided nationally or regionally
- Reduction of Governance cost and transfer of funds to service provision
- Reduced size of management committee