

number of changes will have to be undertaken in the functional aspects of ESIS to make it more friendly, especially as workers in the unorganized sector have little bargaining power compared to their counterparts in the organized sector. Policy planners should consider this aspect while preparing the road maps for health, occupation and environment in the unorganized sector, so that the proposed health service system is able to provide comprehensive health cover to the unorgan-

ized sector. Two-day poster sessions dealt with occupational health problems in the unorganized sector and their solutions.

The uniqueness of the conference was that for the first time in the country the theme of conference 'Occupational health problems in unorganized sector and their roadmap', was addressed in a platform. Around 45 research papers and 20 posters were presented in the conference. Several health problems, epidemiological survey reports and problem-solving measures in the

unorganized sector were discussed among physicians, occupational health experts, environmental engineers, scientists from areas of toxicological and biological sciences, geologists and corporates.

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National Symposium in Chemistry*

The symposium began with the presidential address by G. Mehta (IISc, Bangalore). The second session of the meeting included presentations by H. B. Kagan (Paris-Sud, France), K. N. Ganesh (NCL, Pune), R. C. Boruah (RRL, Jorhat), and K. G. Thomas (RRL, Thiruvananthapuram). Kagan spoke on the chirality propagation in chemistry. A major part of his lecture emphasized the problem of amplifying a small enantiomeric excess, with a simultaneous increase of the quantities of chiral compounds through asymmetric catalysis. This presentation was followed by lectures on 'Aminoproline collagen peptides: Origin of hyperstability' by Ganesh, where he elucidated the relative contributions of factors such as H-bonding, electronegativity, electrostatic and conformational effects on the observed hyperstability of collagen peptides. Boruah presented a variety of strategies to modify the steroidal D-ring to afford a new class of β -formyl enamides. At the end of the session, Thomas presented his work on hybrid nanomaterials which possess unusual photophysical properties both in the ground and excited state.

The third session of the first day started with a presentation by T. Pradeep (IIT-Madras, Chennai) on ice-surface chemistry, where he dealt with a layer approach using spectroscopy and scattering studies. This was followed by a lecture by S. Sampath (IISc, Bangalore) on functionalized and

nanostructured surfaces, where he spoke about redox centre-fixing using thin films on conducting surfaces. B. M. Choudary (Ogene Systems, Hyderabad) spoke about the transition metal complexes in heterogeneous chiral catalysis and their applications in organic transformations. B. Bagchi (IISc, Bangalore), who presented an invited lecture at the meeting, spoke on application of chemical dynamics of water in biological systems and materials chemistry, using theoretical and computer simulation studies. The first day of the meeting concluded with a public lecture in the evening by C. N. R. Rao (JNCASR, Bangalore, and Founder President of the Chemical Research Society of India (CRSI), who shared his experiences of carrying out chemical research in the Indian setting through the lecture entitled, 'Science for our future: Reflections on doing science in India'. Through this well-attended lecture, Rao urged and encouraged the young researchers present in the audience to take up serious research in areas related to chemical sciences.

On the second day, there were four sessions. In the first session, Wudl (UCLA, USA) gave a talk on self-mending plastics. He described how by suitably modifying the monomers through well-planned organic synthesis, the resultant polymers/plastics could be made self-healing or self-mending by application of heat. This was followed by a presentation by R. A. Vishwakarma (NII, Delhi), covering selected aspects of medicinal chemistry dealing with synthesis of GPI-anchored lipophosphoglycan.

The second session started with the Darshan Ranganathan Memorial Lecture (second in the series) by R. Varadarajan (IISc, Bangalore), who described mutational

effects on protein sensitivity. This presentation dealt with design of temperature-sensitive mutants. A. Simon (MPI-Stuttgart, Germany) spoke about s-block metal oxide and nitride clusters with extended metal-metal bonding, which have effects in the interfacial regime of physics and chemistry. Recent advances in soft/hard acid/base chemistry was the subject of the last lecture of the second session, delivered by S. K. Ghosh (BARC, Mumbai), who has employed density functional approach to obtain his new results.

The post-lunch session on day-two began with a presentation by P. T. Perumal (CLRI, Chennai). He described the synthesis of modified pyrazoles and several other organic transformations that employ Vilsmeier reagent. This lecture was followed by a presentation by S. Roy (IIT, Kharagpur) on tin chemistry. His presentation showed how a main group metal such as tin, by the virtue of having two stable oxidation states, can behave like a transition metal in certain aspects. The last lecture of this session was presented by R. Murugavel (IIT, Mumbai). He described the role of metastable ligands in the inter-conversion among metal phosphates.

The post-tea session had two lectures on organometallic chemistry. D. S. Pandey (Rewa) spoke on various aspects of arene ruthenium chemistry covering synthesis, spectroscopic study and reactivity. A. Sarkar (IACS, Kolkata) described his contributions to transition metal organometallic chemistry in the areas of Fischer carbenes, alkene metathesis, and palladium-mediated coupling reactions.

Later in the evening, accepting the lifetime achievement award, K. Nagarajan

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(Hikal R&D, Bangalore), spoke on his experiences as 'Creative research in the chemical industry – Four decades in retrospect'. This lecture described the interdependence of academia and industry. On the last day of the symposium, J. Santhanalakshmi (Chennai) spoke on artifacts of modifications by surfactants on proteins and polymer.

There were 350 posters presented during the first two days of the symposium. Several young researchers and Ph D students had actively participated in the poster sessions and were seen describing their work enthusiastically to other participants. CRSI announced awards for the six best posters on the last day of the symposium. A chemical education pro-

gramme for school/college teachers, was held on the last day, during which the local college chemistry teachers were presented with best teacher awards.

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World Congress on Clinical Nutrition*

There were about 300 delegates representing some 18 countries in the Tenth World Congress on Clinical Nutrition. The theme of the congress was 'Nutrition in the next decade: Nutraceutical/functional food: Product performance in health, disease and safety'. The structure of the congress allowed participants to focus on finding ways to produce adequate food for the rapidly increasing world population, with discussion on various types of products such as those from plant, herb and animal origins, designer foods, pre- and probiotics, conjugated linoleic acid (CLA), etc. World-renowned authorities on these subjects outlined current knowledge on the various products during plenary sessions, followed by concurrent symposia and poster presentations of research and development in these fields. The presentations included production, evidences of performance through nutritional and clinical studies, and safety or possible side effects of these products.

The congress began with a talk by Sudarat Keyuraphan, Minister of Public Health, who dwelt on the subject of food and health. It dealt with herbal and alternative medicines, cautioning against some herbal or health food products. Plant bioflavonoids and polyphenols are being recognized as important nutritional supplements benefiting human health. In tune with this principle of phenolic acids, the first key-

note lecture was delivered by R. R. Watson (College of Public Health and School of Medicine, the University of Arizona, Tucson), who discussed the pycnogenol (French maritime pine bark extract) and plant extract biomodulators for treating hypertension and asthma. Pycnogenol is primarily composed of phenolic acids, derivatives of benzoic and cinnamic acid, and procyanidins with favourable health benefits for the cardiovascular system. Keyuraphan highlighted that pycnogenol reduces platelet activity, lowers high blood pressure, relaxes artery constriction, improved blood circulation, serum levels of low-density lipoprotein (LDL) cholesterol and increases high-density lipoprotein cholesterol. In another keynote lecture, Chanin Charoenpong (Food and Drug Administration, Ministry of Public Health, Thailand) provided an overview of the global food safety, consumer health protection, and fair global food trade practice. He outlined several viable routes for developing food safety policy in Thailand under the slogan 'Safe and Wholesome Food for All in 2004'.

The plenary lectures consisted of several presentations covering diverse areas. M. A. Belury (Ohio State University, USA) reviewed the latest data concerning the role of CLA in energy balance, obesity and metabolism during states of obesity, insulin resistance and type-2 diabetes mellitus. In foods, CLA is prevalent in ruminant dietary sources such as beef, lamb, and dairy products. M. D. W. Varavithya (Mahidol University, Thailand) discussed the role of pre- and probiotics in clinical nutrition. The common probiotic microorganisms consist mostly of strains of bifidobacteria, lactobacilli and streptococcus.

The importance of nutrition to the newborn infant with special emphasis on long-

chain polyunsaturated fatty acids and also benefits of human milk versus formula feeding was the subject discussed by A. J. Sinclair (RMIT University, Melbourne, Australia). P. Subcharoen (Ministry of Public Health, Thailand) spoke on the advancement of modern medicine in the 20th century that has led to the replacement of traditional medicine with allopathic medicine in the national healthcare system. The use of herbal medicine was found mainly in the rural areas of Thailand, where easy access to modern medicine was limited. However, during the past 15 years, the role of herbal medicine as household remedies for treatment of minor diseases and symptoms as well as in the health service system of the country has significantly increased. The reasons for such increased demand, especially for single herbal products are the 'back-to-nature' global trend and the belief of the general public that natural products are safer than chemically synthesized products. Subcharoen's discussion was aimed at understanding alternative medicines such as hydrotherapy and aromatherapy for health and wellbeing. The talk by I. A. Khan (The University of Mississippi, USA) gave an overview of recent progress in traditional medicine. About 80% of the people in developing countries rely on traditional medicine for primary healthcare. The traditional medicines are slowly being integrated into modern medicine in the form of dietary and nutritional supplements. Khan also talked about valid science-based integration, pharmacological and clinical studies that must be conducted on plants lacking such data. Adverse events, including drug-herb interaction must also be monitored in order to promote a safe integration of efficacious herbal medicine into conventional medical practices. A broad range of clinical nutrition in eight

*A report on the Tenth World Congress on Clinical Nutrition organized by The Prince of Songkla University, International College of Nutrition and National Centre for Genetic Engineering and Biotechnology from 30 November to 3 December 2004 held at one of the almost world-renowned spas and beach resorts, in the natural and relaxed surroundings of Phuket Island, Thailand.