Teamwork

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This issue of 'Teamwork' includes:

1.- ACD Officers' meeting in Pau

The ACD Officers (Prof. Lobinski - Division President, Dr. Fajgelj - Vice President, Prof. R. Smith - Division Secretary and Prof. Powell - Division Past President) met in Pau, France on 18th and 19th November 2006. The meeting was hosted by Prof. Lobinski at the University of Pau. The most important discussion points were:

- Preparations for the GA and IUPAC congress 2007 in Turin. At the Congress there will be six half-day sessions coordinated and organized with the cooperation of ACD.
- Project progress reviews on a six monthly basis has proven to be a very useful and effective approach to assist in the smooth realization of IUPAC ACD projects. However, the review of project reporting practices has revealed that around 40 % of projects still remain without progress reports. All ACD members and especially task group leaders are therefore encouraged to report regularly and promptly.
- Division structure and responsibilities were discussed. Some changes in the terms of reference of the ACD and the duties of the Officers were introduced. They will be presented to ACD members at the GA in Turin. Short meetings (30 to 60 min) of all ACD Task Groups will be organized during the meeting.

2.- ACD composition and new members

ACD is currently composed of 10 Titular Members (including 4 officers), 6 Associated Members, and 8 National Representatives (10 are possible), and one provisional member. The Subcommittee on Solubility and Equilibrium Data (SSED) and the Interdivisional Working Party for Harmonization of Quality Assurance (WPQA) continue to be an integral part of the Division. Following the recent election of Titular members a number of new faces will be joining the ACD for the next biennium. The following are short CVs of some of the new members or members who will rejoin the ACD:

Prof. John W. (Jack) Lorimer is a physical chemist who has been involved in IUPAC for many years. He started as an Associate Member of Sub-committee V.6.1 (Solubility Data), 1977-1979, becoming a TM and Secretary of Commission V.8 (Solubility Data) from its beginning in 1979 to 1983. In 1984, he organized the first International Symposium on Solubility Phenomena. He chaired V.8 from 1987 to 1991, was Editor-in-Chief of the Solubility Data Series from 1988-1991, and again a TM of V.8 1979-1983. He was an elected member of the Bureau from 1993-2001, a member, then chair, of the Project Committee,

1999-2003, a member of the Canadian delegation to Council on several occasions and a co-opted member of the Division V Committee 1983-1987 and 1993-1995. After 1999-2001 as an AM and TM of IDCNS, he became a TM on ICTNS and currently chairs that committee. As chair of ICTNS, he is editor, Technical Reports and Recommendations, for PAC and a member of the Editorial Advisory Board. Jack has been co-author of two volumes in the Solubility Data Series and also of IUPAC Recommendations: Glossary of Terms Related to Solubility (currently under review). He has also written a number of reports for CI. He looks forward to continuing his IUPAC contributions as a member of the Sub-committee on Solubility and Equilibrium Data - a return to his roots in IUPAC work!

Dr. Maria Belli since 1999 is the head of the Environmental Metrology Service of APAT (Italian Environmental Protection Agency). APAT, established in 1994, represents the focal point for the European Environmental Agency. The Metrology Service of APAT has the responsibility to assure the comparability of the analytical data between the laboratories of the regional environmental agencies. To this end the major activities of the Service are: the development and validation of standard methodologies for environmental monitoring; pre-normative research activities, production and characterization of environmental reference materials and the organization of inter-comparison exercises. Maria Belli was responsible together with Ales Fajgelj and Umberto Sansone from IAEA for organising an APAT IUPAC workshop on "Combining and reporting analytical results" in Rome from 6 to 8 March 2006. Proceedings of the workshop were published by the Royal Society of Chemistry in December 2006. Maria is responsible for the IUPAC project "Trace elements analysis: role of grain size distribution in solid reference materials." The aim of the project is to develop a guide to be used by reference material producers and by the analytical community to select the most appropriate particle size distribution of a particular reference material to fit the analytical needs.
She is part of the IUPAC project "Selection and use of proficiency testing schemes for limited number of participants (chemical analytical laboratories)". The aim of the project is the development of a guide for the selection and use of proficiency testing schemes involving a limited number of participants (chemical analytical laboratories). Maria is part of the General Metrology Commission established by the Italian Standardization Body (UNI). In this context she is the co-ordinator of a working group on reference materials. She was the Italian representative in ISO/REMCO. She participated at the working group for the elaboration of the EURACHEM/EUROLAB/CITAC/Nordtest guide on measurement uncertainty arising from sampling.

Dr. Paolo de Zorzi (Italian born 1960) graduated in Chemistry. After working for private companies in the environmental field for 16 years, since 1999 he has been an environmental technician at the Environmental Metrology Unit of APAT (Italian Environmental Protection Agency). Paolo is responsible for an international project aimed at assessing the uncertainty associated with the sampling in agricultural soil, semi-natural soil, urban and contaminated environment (SOILSAMP) and establishing protocols for soil sampling in different environments. One of the outcomes of the project was the publication by IUPAC in *Pure Appl. Chem*. 77(5), 827-841, 2005 of the IUPAC Recommendation 2005 "Terminology in Soil Sampling". On the basis of the existing terminology documents and of the most recent knowledge in the field of soil sampling, including topics related to the estimation of the associated uncertainty, the IUPAC Recommendation represents an up-dated terminology in sampling (specifically soil sampling). He is involved in the co-ordination of national and international inter-comparison exercises on soil sampling and he supported the International Atomic Energy Agency (IAEA) in the organization of a Soil Sampling Inter-comparison Exercise (IAEA/SIE/01). The activity was carried out with a selected number of laboratories participating in the ALMERA Network (Analytical Laboratories for the Measurement of Environmental Radioactivity) The objective was to compare the soil sampling protocols used by the different participating laboratories, in the situation where they are asked to determine the mean value of several radionuclides in an agricultural area of about 10000 square meters. The inter-comparison exercise was performed at the end of 2005 in Italy within an area qualified as a "reference site" in the framework of the SOILSAMP international project. He participates in training courses at national and international level on sampling, mainly focused on estimation of uncertainty arising from sampling. He participated at the Eurachem/EUROLAB/CITAC/Nordtest working group to publishing a guide on estimation of measurement uncertainty arising from sampling.

Note: *Dr. Paolo De Zorzi has been nominated as the new Chairman of the Interdivisional WP on Harmonization of Quality Assurance. He will take this position at the occasion of the IUPAC GA in Turin.*

Dr. Ilya Kuselman is Scientific Director of the National Physical Laboratory of Israel. He is a specialist in the fields of metrology, quality and standardization in chemistry and has published about 170 papers and 9 patents in these fields. Dr. Kuselman is the newly elected Chairman of "Co-Operation on International Traceability in Analytical Chemistry" (CITAC <www.citac.cc>). He is Regional Coordinator of the National Conference of Standard Laboratories (NCSL International) and is now also a Member of the Interdivisional Working Party for Harmonization of Quality Assurance of IUPAC.

> see current membership

3.- ACD projects

There are currently 38 active projects under the ACD umbrella, including 2 projects run by the WPQA, 12 projects run by the SSDE. ACD is also involved in 9 projects coordinated with other Divisions. The complete project list and detailed information can be obtained from:
http://www.iupac.org/divisions/V/cp5.html

We wish the task groups good luck in bringing the projects to a successful conclusion.

4.- Report from SSDE (H. Gamsjäger)

At the 5th Annual Meeting of the IUPAC Subcommittee on Solubility and Equilibrium Data the Franzosini Award went to Prof. Dr. Dewen Zeng in appreciation of his scientific contributions to the Solubility Data Project. A short laudatory note has been published in *Chemistry International*, 28, No. 6 (2006) 23.

The 12th International Symposium on Solubility Phenomena and Related Equilibrium Processes was held at the TU Bergakademie Freiberg in Germany under the auspices of IUPAC. As initiated at the 10th ISSP in Varna the organization of a workshop on a special topic related to solubility was continued. This time "Quality assurance in thermodynamic databases for performance assessment studies in waste disposal" was discussed.

The three IUPAC poster prizes were given to Prof. Alexander S. Lileev (N.S. Kurnakov Institute of General and Inorganic Chemistry of Russian Academy of Sciences, Russia) for the poster, "Non-additivity of contributions into the dielectric constant of saturated solutions and ion-ion interactions in ternary water-salt systems", to Dr. Sven Hagemann (Gesellschaft für Anlagen- und Reaktorsicherheit, Germany) for the poster, "A new simple method for the investigation of hydrogen sulfide solubilities in aqueous solutions" and Georgia Wollmann (Institute of Inorganic Chemistry, TU Bergakademie Freiberg, Germany) for the poster, "Solubilities related to substituted polyhalites". A conference report has been published in *CI*, 28, No. 6 (2006) 31.

A collection of 12th ISSP Plenary and Invited Lectures as well as the Workshop report have been published in *Pure Appl. Chem*. 79(5), 825-894 (2007).

In January 2007, project 2005-017-1-500 "Glossary of Terms Related to Solubilities" by H. Gamsjäger, J. W. Lorimer, P. Scharlin, D. G. Shaw (Task Group Chair) was submitted to Peer Review. A poster presentation of the "Glossary" project at the 41st IUPAC World Congress in Torino is in preparation.

5.- A New Project: Metal-focussed -omics: guidelines for terminology and critical evaluation of analytical approaches (R. Lobinski, J.S. Becker, H. Haraguchi, B. Sarkar)

Bioinorganic analytical chemistry is a rapidly developing discipline at the interface of trace element analysis and analytical biochemistry which targets the detection, quantitation, identification and characterization of complexes of metals (metalloids) with molecules of natural origin (biomolecules) by hyphenated (coupled) techniques (*PAC*, 1999, 71, 899-917). The advances in trace element analysis in the life sciences have resulted in a proliferation of new terms related to the description of metal-interactions with biomolecules. Examples of these terms include: metallome, ionome, metalloproteome, metallogenome, metallometabolome, heteroatom-tagged proteome, single element proteomes (ex. selenoproteome) and the corresponding -omics. The terms are being coined by various disciplines and the lack of communication between them is resulting in a growing confusion. All the terms are very recent and were not considered in the *Guidelines for Terms Related to Chemical Speciation Analysis* published in *PAC*, 2000, 72, 1453-1470. In addition to the confusion in terminology, the methodological approaches are specific to each individual discipline. They have all the characteristics to be complementary but in practice they are carried out independently. The project aims to carry out a critical analysis of these approaches, of the information they produce and of the validity of data obtained. The project targets the speciation analysis community organised around the European Virtual Institute of Speciation Analysis (EVISA, <www.speciation.net>), structural genomic consortia, clinical biochemistry, medicine and health sciences communities (characterization of metal-related diseases and related areas, heteroatom-containing species as new clinical biomarkers), nutrition and metabolic sciences (molecular targets of metal binding for essential nutrients and toxic metals), and environmental toxicology (toxic metals in life-sciences and their environmental effects). It should be of interest to regulatory bodies asking the question on what valid information can be obtained in a quantitative and routine way in the metal-related -omics areas.

> see project 2006-037-1-500

6.- ACD links with other International Organizations and Groups

In the 2006-2007 biennium the Members of the ACD formally represent IUPAC in the following organizations: the Inter Agency Meeting (IAM), the International Committee on Weights and Measures/Consultative Committee for Amount of Substance - Metrology in Chemistry (CIPM/CCQM), the International Committee on Weight and Measures/Joint Committee for Guides in Metrology (CIPM/JCGM), the International Organization for Standardization - Committee on Reference Materials (ISO REMCO). There are however numerous other organizations and groups with which the ACD members cooperate. In the forthcoming issues of Teamwork we intend to provide a short description of the activites of these organizations in liaison (one per issue) and to provide the necessary links for interested readers. This time we present the Consultative Committee for Amount of Substance - Metrology in Chemistry (CCQM) and International Bureau of Weight and Measures (BIPM). You may access the PowerPoint presentation under the following link <www.iupac.org/standing/on/ccqm>.

7.- Invitation

IThere will be the formal presentation on Sunday, 5 August 2007 at 11:15 of the report of the project 'Metrological Traceability of Measurement Results in Chemistry' by Paul De Bièvre, René Dybkaer, Ales Fajgelj and Brynn Hibbert. This project and its outcome is relevant for all areas of chemistry which include measurement results and therefore you are cordially invited to attend the presentation. More information about the project can be found at:
www.iupac.org/projects/2001/2001-010-3-500.html

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