

International Union of Pure and Applied Chemistry

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Chemistry and Human Health Division
Commission VII.C.1: Nomenclature, Properties and Units

Minutes of meeting, Berlin August 8 – 10, 1999

0.0 The meeting opened at 9:00 AM. Present for the opening of the meeting were the following titular members for the C-NPU (TM): Wolf R. Külpmann (WRK) and Pedro Soares de Araujo (PSA) secretary of the C-NPU, and the following associate members: Prof. Urban Forsum (UF) and Dr. J. Gilbert Hill (GH), former secretary of C-NPU. GH was present on behalf of Dr. Clement McDonald (CM) who was unable to attend. Intermittently attending *ex officio* were Dr. H. Peter Lehman (PL), former chairman of C-NPU and member of the Scientific Division of IFCC and TM of the Clinical Chemistry Section Committee (VII.C) and Dr. Anders Kallner (AK) vice-president of the Chemistry and Human Health Division and president of the Clinical Chemistry Section Committee (VII.C).

PSA informed that Antonin Jabor (AJ) had mailed him a message informing that he couldn't come to Berlin for this meeting due to his responsibilities in his hospital during this period of the year. AJ promised to mail a report of his activities later.

The secretary explained that the Commission chairman Dr. Xavier Fuentes-Arderiu (XFA) could not attend the meeting due to family reasons. It was arranged with AK, that Dr. Henrik Olesen (HO), former chairman of C-NPU, would act as chairman for this meeting. Unfortunately, due to health problems in his family, HO also could not attend this meeting.

Therefore the secretary proposed that Dr. René Dybkaer (RD), dean of the members of C-NPU and titular member of IFCC C-NPU be elected as the acting chairman for this meeting while the secretary PSA would retain his position.

Those present accepted the proposal and RD assumed the chair.

1.0 The agenda was finalized with minor corrections. PSA remarked that the new policies of the Union, moving toward a project driven structure, would be discussed under agenda item 9.

AK and PL mentioned that they were attending only the morning session of the C-NPU with the specific objective of clarifying these new policies and assisting the committee in those matters. Furthermore AK mentioned that during this transition period the established rules would be changed as the need arises. Just to exemplify, he mentioned that he sent an inquiry to Dr. E. D. Becker secretary general of the Union about the possibility of projects having experts from non-member countries. C-NPU will be notified in due course.

Due to the importance of the organizational matters, it was proposed that the agenda items 9.0 – Strategic Plans / Terms of Reference, 11.0 – Membership and 7.0 – New projects would be treated while AK and PL were participating of the meeting before continuing with item 4.0 Status report / Review of Projects. This rearrangement was accepted.

2.0 The minutes of the meeting in Seville were approved with a few slight modifications. The approved minutes are to be sent to AK and T.D. Geary, secretary to Clinical Chemistry Section Committee (VII.C) and to Dr. Carl A. Burtis, chair and to Prof. J.H.H. Thijssen, secretary of the Scientific Division of IFCC.

3.0 Member's reports

AK reported on suggestions for finally moving the C-NPU web site to WHO which would be a logical solution and also would take care of the maintenance costs. PL reported that LOINC has made an agreement with SNOMED in which SNOMED reorganizes its weakness in the laboratory domain, and reduces duplication of activity. He raised a question about conflicts of interests.

GH – reported about LOINC activities. In the last year, versions L and M of LOINC have been issued. Version M is currently available for download from the Duke University site (<http://www.mcis.duke.edu/standards/termcode/loinc.htm>). New in version M are a large number of items related to veterinary medicine, and molecular genetics. In Canada two provinces (Ontario and British Columbia) have made a formal commitment to adopt LOINC as the standard for interlaboratory communication of results, and plans for province-wide implementation are in preparation.

Several other provinces have expressed interest, and it is likely that LOINC will become a national "standard". As far as is known, the only currently active implementation of LOINC in Canada is in the laboratory component of the electronic child health network (eCHN) being developed by the Hospital For Sick Children in Toronto. This network links five institutions, a home care nursing organization and fifteen community pediatricians, and permits the transfer of laboratory data (except microbiology), transcription notes and radiographic images.

The report of XFA was mailed to PSA as an attachment and it was presented to the meeting. XFA has actively collaborated in the preparation of the experimental standard ISO/DIS 15189 Quality Management in Medical Laboratories in the frame of the Working Group 1 of the ISO/TC 212 Clinical laboratory testing and in vitro diagnostic test systems. The net result of this collaboration was the inclusion in this standard of an explicit text saying that, SI units and the IUPAC recommendation on the syntax for describing quantities and other properties, should be used in the clinical laboratory.

XFA has achieved an agreement with the University of Barcelona to place in the website (<http://www.ub.es/slc/terms/normterm.html>) a collection of references on units and nomenclature useful in the clinical laboratory.

XFA made a first contact, in order to introduce the C-NPU, with G. Pacini, chairman of the Technical Committee 13 of the International Measurement Confederation (IMEKO).

XFA sent a copy of the draft on molecular biology to the European Molecular Biology Organization.

XFA directed the first edition of the Spanish course on "Technical and economical management of the clinical laboratory" in Barcelona which was supported by IUPAC. XFA directed in Mexico City (within the frame of the Congress of the Mexican Association of Clinical Biochemistry) the course on "Metrology in clinical laboratory

sciences" also supported by IUPAC. It is intended to repeat this course in Montevideo next September.

XFA proposed two activities to the Division: a) To work with the appropriate WHO group in order to harmonize the remaining discrepancies regarding the trivial names of some chemical compounds between WHO and IUPAC/IUBMB and b) To promote the use of the amount-of-substance related kind-of-quantities to describe the composition and doses of pharmaceuticals.

UF commented on the databases in Spanish and Catalan, and encouraged HO and XFA to produce articles which would help the wide dissemination of C-NPU database work.

UF reported on the slow progress of the expansion of the database to harbor the entries related to virology and microbiology.

WRK reported on the letter from DR. C. Heuck of WHO addressed to AK concerning the continuation of project 28/97. This letter denied that WHO had an interest in the subject.

PSA reported that IBM has donated computers with the SNOMED database to the University of Recife in the state of Pernambuco, in the northern region of Brazil. This action could hinder implementing the C-NPU database in this country. No further progress was obtained since the meeting in Seville, because there were two changes in the Ministry of Health in Brazil during this period except that the University of S. Paulo agreed to adopt the C-NPU rules in its publications and theses.

The e-mailed message from AJ informed that collaboration was started with Dr. Kahovec from the Czech branch of IUPAC to translate the C-NPU database into Czech. He also reported the progress on the Urinary Calculi and on the Function Tests projects which are under his leadership.

4.0 Status report / Review of Projects

All the projects undertaken by C-NPU, finalized or under development, were listed in a document prepared by HO. Each project on this list was analyzed by the meeting and a new updated list of ongoing projects was prepared with the corresponding comments added. (Annex 1)

5.0 Organizations: contacts and meetings

5.1 LOINC – please see the above report by GH

5.2 ISO/TAG 4 and FICOM – ISO/TAG4 was the original ISO group where TAG (technical advisory group 4) - which was dissolved – dealt with GUM and VIM. Then JCGM was created as an independent organization. JCGM has two working groups: GUM and VIM. IFCC is represented by RD and IUPAC by Ian Mills, with five more organizations: IUPAP, OIML, Bureau IPM, ISO and IEC. GUM had no thorough revision this time. For the area of Chemistry Eurachem is preparing a guide. VIM is presently under active discussion. J-TAG4 was created after ISO/TAG4 was dissolved, only with ISO and IEC members, and their subject will be known through RD who has a seating in VIM.

5.3 Others – RD as IFCC delegate on CCU-CIPM, presented the petition on katal.

5.4 Enzyme Commission IUBMB: no news under this topic

6.0 IFCC – RD commented on the absence of the C-NPU at the Florence meeting where HO presented a poster entitled *NPU coding scheme for Clinical Laboratories*. RD reported that IFCC seemed pleased with the CNPU performance. It was also mentioned that the Committee on Molecular Biology Teaching, chaired by Prof. Christine Mannhalter, would like to collaborate with C-NPU efforts. Remarks were made that it would be of interest of C-NPU to submit an article to the IFCC home page with an editorial by the president of IFCC. The commission approved the suggestion that a document concerning presentation of data would be submitted to the Vancouver group with a supporting letter of the president of IFCC.

7.0 New projects – The commission approved an active participation on nomenclature for the seven new projects from the Division. UF proposed as a new project in the future, which could be a topic for the series “Properties and units in the clinical laboratory sciences”, Transfusion Medicine and Tissue Typing.

8.0 Recent publications in Properties and Units – AJ informed the publication of the article: Jabor, A and Palicka, V. Rational use of clinical chemistry investigations: from diagnoses to processes. *Ann. Clin. Biochem.* **35**: 351-353 (1998)

XFA informed the publication of the following articles:

T. Palencia Domínguez, M.C. Pastor Ferrer, X. Fuentes Arderiu. Terminología bioquímico-clínica: monitorización farmacoterapéutica y toxicología. *Química Clínica* **17**: 32-37 (1998)

J.M. Martínez Cervera, V. Álvarez Funes, X. Fuentes Arderiu, M.J. Castiñeiras Lacambra. Terminología bioquímico-clínica: vocabulario de cualitología. *Química Clínica* **17**: 386-388 (1998)

X. Fuentes Arderiu, L.F. Bertello, S. Raymondo, R. Álvares Echevarría. Recomendación sobre la nomenclatura y las unidades de las magnitudes biológicas. *Química Clínica* **18**: 160-75 (1999)

X. Fuentes-Arderiu. Trueness and Uncertainty. [Guest essay in the Jim Westgard's website].

X. Fuentes-Arderiu. Glossary of ISO metrological and related terms and definitions relevant to clinical laboratory sciences. [Reference document in the Jim Westgard's website].

9.0 Strategic Plan/ Terms of Reference - PL commented that IUPAC's new system represents a 'harmonization' with the structure being implemented by IFCC where the working groups have been emphasized during the last few years. AK commented on the recent document by the president of the division, Prof. C.G. Wermuth, where already a set of new projects are geared to comply with the new structure; they are all in the area of Medicinal Chemistry. AK also commented that the members of that section want the sections to be retained under the division while according to the new structure the sections should be abandoned together with the commissions.

In fact, AK asked the C-NPU to express its opinion about this subject in written form, directing the document to himself and to the IFCC SD president Dr. Carl Burtis, especially because in his opinion the C-NPU activity can be regarded as a IUPAC core activity.

WRK proposed that the IFCC committee on NPU be maintained as a think tank that would propose projects for IUPAC, because the maintenance of the IFCC-IUPAC link is very desirable.

It was explained by AK and PL that IUPAC still maintains the bylaw which restricts the period of service of a titular plus associate member to 10 years. At the project level, the question is still open. Furthermore, AK explained that within the new structure adopted by the Union, commissions and sections are to be dissolved and the project-driven system will be fully operational in 2002. Current projects should be finished before the end of 2001. Application of new projects should be according to the new project form. Current projects, which cannot be completed before that deadline, will have to be re-submitted according to the new rules.

10.0 Budget - It was reported that the C-NPU budget for the next two years should be maintained at the present level.

AK also informed that we don't have information, at this time, about the proposed 5 % increase on budgets after 2002.

RD who participated at the IUPAC Division VII – Chemistry and Human Health – meeting as the acting chairman of the C-NPU, reported that IUPAC is rich, according to the IUPAC Treasurer and will increase the Division budgets, probably already in 1999. From this report it appeared that the fraction of the budget used by C-NPU is very small, and that this commission just have to ask for more.

11.0 Membership - It was proposed that the current number of TM (6) be maintained for the biennium 2000-2001.

XFA due to time limit in office and at his own suggestion will become a AM. The meeting approved the proposal of WRK, UF, AJ, Gunnar Nordin (GN) and PSA as TM for the biennium 2000-2001. UF and GN are currently AMs. There is still one open position for TM and a candidate will be proposed after further consultation. The meeting proposed a president (UF) and a secretary (PSA). The meeting asked the secretary to request confirmation by mail from the absent TMs on these matters.

12.0 Future meetings – The meeting agreed that for the next biennium C-NPU should have two meetings per year

13.0 Other business – nothing was commented under this topic.

14.0 Closing - The meeting closed at 13:30 on August 10, 1999

Annex 1 to the minutes of the C-NPU meeting in Berlin

Berlin, August 10, 1999

List of C-NPU ongoing projects (op)

Project 18/87. Properties and units in the clinical laboratory sciences.

VII. Properties and units of markers in inborn errors of the metabolism.

Recommendation. JG Hill, D Kenny, H Olesen

This is an op with a definite need for systematic review and compilation of codes and properties in the field. The provisional project leader is H Olesen.

VIII. Properties and units in Clinical Microbiology.

Recommendation. U Forsum, H Olesen, W Fredericksen, B Person

This ongoing project had its scope broadened following a suggestion by H Olesen, endorsed by U Forsum, to encompass bacteria, virus, fungi and parasites. Collaboration with the International Union of Societies of Microbiology is under consideration. The provisional project leader should be agreed between H Olesen and U Forsum.

XII. Properties and units in Clinical Pharmacology and Toxicology.

Technical report. H Olesen, D Cowan, R dela Torre, I Bruunshuus, M Rohde, D Kenny

This is an op that will certainly be finalized before 2001. In its current stage it was accepted by the SD for publication in the IFCC website.

XIV. Properties and units in Tumor markers.

R Molina, X Fuentes-Arderiu

This op had a new version of the manuscript revised during the Berlin meeting. It is envisaged that this project can be finalized before 2001. The project leader is X Fuentes-Arderiu.

XVI. Properties and units in Clinical Allergology

H Olesen et al.

This op has received approval for publication from SD from IFCC and support from international organizations in the field. It is envisaged that this project can be finalized before 2001. The project leader is H Olesen.

XVII. Properties and units for Urinary Calculi.

A Jabor et al.

This op has had a few versions and is currently under revision by the project leader. A new version is expected to be discussed in the following meeting of C-NPU. We believe that this project will be concluded before 2001. The project leader is A Jabor.

Project 24/95. Basic metrological concepts and definitions in clinical laboratory sciences.

X Fuentes-Arderiu, R. Dybkaer

It was agreed that this project should be removed from the IUPAC projects list. The principal activity for the moment is to monitor the activities going in VIM. R. Dybkaer will do the monitoring which will be considered an internal activity of C-NPU. If and when the need arises a new project can be submitted on this topic.

Project 25/95. Properties and units in Clinical Molecular Biology.

Technical report. PS de Araujo, B Zingales, P Alia-Ramos, A Blanco-Font, X Fuentes-Arderiu.

A new version of this manuscript was revised during the meeting in Berlin. It is envisaged that this op can reach finalization before 2001. It was approved during this meeting for inclusion in the project 18/87 as part XIX.

Project 26/95. Properties and units in flow cytometry.

A Ruiz-Arguelles, X Fuentes-Arderiu

Very recently a collaboration between the project leader (X Fuentes-Arderiu) and the chairman of the IFCC committee on flow cytometry (A Ruiz-Arguelles) was established and the authors will start the preparation of a first draft.

This project will certainly extend beyond the year 2001. The project leader will complete the new project submission form, if necessary.

Project 27/95. C-NPU Internet Web site

H Olesen, I Ibsen, U Forsum, X Fuentes-Arderiu, PS de Araujo, JG Hill, C McDonald, R Dybkaer, I Bruunshuus

This is a core project for C-NPU, and it is a continuously ongoing activity. It encompasses the compilation of NPU codes for properties and other international codes for elements. The number of codes for properties is presently about 10000. The number of elements is about 12000. At the moment this web site is hosted at www.ifcc-iupac.suite.dk, with a transfer of the central database to Sweden approved and with funds until

the end of 2001. The possibility that WHO will later host this web site is under current consideration since that organization should take care of the funds needed to maintain its permanent activity. A project leader will be agreed between H Olesen and U Forsum to settle the mechanisms of transfer and future collaboration.

Project 32/97. Properties and units for dynamic function tests.
A. Jabor

The current leader of this project is A Jabor.

List of C-NPU new projects

It is a clear commitment of the C-NPU to actively participate in new projects proposed for the Chemistry and Human Health Division, contributing to the nomenclature, according to the interdisciplinary character of these broad projects.

- 1) A new project for the Properties and units series (Project 18/87) on Transfusion Medicine and Tissue Typing was proposed by U. Forsum. It is envisaged that this project will cover a large area of interests in the Clinical Laboratory Sciences with applications also for the *in vitro* diagnostic industry. The provisional project leader is U. Forsum who will prepare the new project form.
- 2) A new interdivisional project is proposed on the use of the NPU concept system for properties in the field of Environmental Chemistry. The project should be prepared by the collaborative effort of the two divisions including A Kallner, J. Duffus and WR Kulpmann.