

The Florianopolis Conference had 216 scientific contributions which were submitted from 43 countries. The Chair of the National Committee was Professor Eduardo Humeres of the Universidade Federal de Santa Catarina, the host institution of the meeting. There were also Pre-conference and Post-conference Symposia in Mexico City and Puerto Iguazu (Argen-

tina), respectively.

Together, these meetings showed not only the worldwide dynamism of Physical Organic Chemistry, but also the strength and maturity of the chemical sciences in Latin America.

Prof. Thomas Tidwell

## Reports from Commissions

### Nomenclature Committee of IUBMB (NC-IUBMB) and IUPAC-IUBMB Joint Commission on Biochemical Nomenclature (JCBN)

#### Report of current activities, May 1998

As stated in the committees' web page <<http://www.chem.qmw.ac.uk/iubmb/nomenclature/>>, 'the purpose of the committees is to coordinate recommendations to aid communication of biochemical information by encouraging scientists to use generally understood terminology'.

At our meeting in Prague on 16–18 May 1998, two large projects occupied most of our time, bioinformatics, and listing enzymes, the first two of the following topics.

#### 1. Bioinformatics

On bioinformatics, we are already participating in the scheme that Berendson has put to ICSU. But we are more excited by the ideas Cantor had produced on forming an International Network of Protein Databases. He pointed out the need to collect experimental work on proteins over the last 50–100 years, and put it into computer-readable form, so that the knowledge could readily be accessed. This is precisely within the function of the Unions to spread scientific knowledge. He outlined how this could be approached.

The aim would be a database for each protein or type of protein. To be widely useful, standards would need to be similar for each. Laying these down would be the first phase. Berman has done some pilot work with students. This phase would need to be tried with several different proteins so as to develop a robust procedure. This would be followed by an educational phase, finding local editors for each database, and teaching them, e.g. by running workshops. Much of this could be in relatively undeveloped countries, and many of the databases could be located there. Quality control proce-

dures would need to be set up.

Members raised many difficulties, but agreed that these could probably be overcome, and that the whole project was worthwhile. It would involve inter-Union collaboration, and would commission much work in less developed countries, where it would give opportunities to those interested in bioinformatics who have no lab.

A working party was set up, headed by Cantor, with Apweiler, Bairoch, Berman, Cammack, Cornish-Bowden, and Tipton. They could call on others; all members of the committees were willing to help. They would:

- lay out a preliminary set of guidelines for (a) standards for the databases, and (b) standards for the types of data to be included;
- run a pilot study on a few proteins; and
- try to obtain sponsorship.

Cantor would seek IUPAB participation, so that it would be inter-Union from the start.

#### 2. Enzymes

The listing of enzymes remains a large part of the committees' work, since the accurate and unambiguous description is used in many fields and is needed in databases. Most of the points had been raised by correspondence before the meeting, and this made it possible to go through a large supplement to the list.

*2.1. We approved complete descriptions for listing 151 new enzymes.* Two clarifications are awaited before these can form a supplement for submission to *Eur. J. Biochem.* and publication on WWW pages. We were interested in how often authors made errors in submitting enzymes for listing, one even giving a chiral descriptor to an achiral substrate.

*2.2. We modified the descriptions of 38 previously listed enzyme in major ways. These will be added to the new entries in the supplement.*

2.3. A very large number of existing entries received minor modifications, and these will appear in the next general update of the list.

2.4. In addition to enzymes generally, peptidases required special treatment. The entries for about 250 enzymes were modified by adding further information about the classes they belonged to.

2.5. We agreed to that the whole list now needs revision, and that we would examine it, one subclass at a time, using a closed website for circulation within the committees.

2.6. We identified specific groups of enzymes in urgent need of updating, including GTPases, initiation and elongation factors, transporting ATPases and protein kinases. Advice is being obtained from groups of experts in each case.

2.7. Linkage is proceeding of Enzyme Nomenclature to other databases, including those for thermodynamics (GOLDBERG), enzyme properties (BRENDA), metabolic properties (KLOTHO, DRAGON, etc.), clinical chemistry (CPNU) and structural features (SWISSPROT, TREMBL, etc.).

2.8. We agreed to seek advice on formulating procedures for dealing with multifunctional enzymes.

2.9. We are working on the classification of catalytic antibodies, ribozymes, mutated and synthetic enzymes, protein kinases.

### 3. Metabolic pathways

Don Nicholson has generously transferred the copyrights on his metabolic charts and Inborn Errors of Metabolism to IUBMB. The nomenclature committees give high priority to presenting the charts in computer-readable form on the web, and are keen to contribute to this by working with him. They will therefore be delighted to learn that negotiations with Sigma are proceeding, and that there is the prospect that Sigma will support the web version.

### 4. Transport proteins

Kotyk pointed out that the coverage of transport proteins in *Enzyme Nomenclature* was poor. He was appointed to form a panel to advise on these and Apweiler, Cantor and Dixon were willing to serve on it, and M. Ashburner and Apweiler would try to raise financial support for the work.

### 5. Biotechnology

Schmid told the committees of the work of the IUPAC Commission on Biotechnology (COB), which is presented on <<http://www.itb.uni-stuttgart.de:8080/IUPAC/>

>. Several items of common interest emerged, and the committees will work with COB on them.

### 6. Published recommendations and web access

Nomenclature-of-Carbohydrates, published in *Pure Appl. Chem.* 1996, **68**, 1919–2008; *Adv. Carbohydr. Chem. Biochem.* 1997, **52**, 43–177; *Carbohydr. Res.* 1997, **297**, 1–90; *J. Carbohydr. Chem.* 1997, **16**, 1191–1280, is now available on the web <<http://www.chem.qmw.ac.uk/iupac/2carb/>>. It is being consulted about 140 times per week. Apart from organic class names <<http://www.chem.qmw.ac.uk/iupac/class/>>, at 450 per week, it is more consulted than any other IUPAC document, though closely followed, at 130 per week, by our recommendations on Nomenclature-and-Symbolism-for-Amino-Acids-and-Peptides <<http://www.chem.qmw.ac.uk/iupac/AminoAcid/>> and (100 per week) the section of Enzyme-Nomenclature on peptidases <<http://www.chem.qmw.ac.uk/iubmb/enzyme/>>, which is about to be updated (see 2.4 above). (These figures exclude local access to the sites.) Our steroid recommendations <<http://www.chem.qmw.ac.uk/iupac/steroid/>>, added in 1996, receives 80 visits per week.

Nomenclature-of-Glycolipids was published (*Pure Appl. Chem.* 1997, **69**, 2475–2487) and will appear in *Eur. J. Biochem.* 1998; it is now also on the web at <<http://www.chem.qmw.ac.uk/iupac/misc/glylp.html>>

The following recommendations of ours have been added to the website since 1 May 1997. The URL is always <<http://www.chem.qmw.ac.uk/>>, followed by that given below. The final column gives the approximate weekly visiting over the last few weeks:

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Nucleic acid sequences	<a href="http://www.chem.qmw.ac.uk/iubmb/misc/naseq.html">iubmb/misc/naseq.html</a>	20
Branched nucleic acids	<a href="http://www.chem.qmw.ac.uk/iubmb/misc/bran.html">iubmb/misc/bran.html</a>	5
Multienzymes	<a href="http://www.chem.qmw.ac.uk/iubmb/misc/menz.html">iubmb/misc/menz.html</a>	5
Newsletter	<a href="http://www.chem.qmw.ac.uk/iubmb/newsletter">iubmb/newsletter</a>	30
Polypeptide conformation	<a href="http://www.chem.qmw.ac.uk/iupac/misc/ppep1.html">iupac/misc/ppep1.html</a>	20
Polynucleotide conformation	<a href="http://www.chem.qmw.ac.uk/iupac/misc/pnuc1.html">iupac/misc/pnuc1.html</a>	10
Glycoproteins	<a href="http://www.chem.qmw.ac.uk/iupac/misc/glycp.html">iupac/misc/glycp.html</a>	15

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Total usage of IUPAC's and our recommendations on the web is 1300 per week and comes from 95 countries.

### 7. Other needs

We are contacting previously appointed working parties, setting up new working parties, and seeking advice from individuals, in order to assess needs and the progress being made to meet such needs.

**H.B.F. Dixon**  
Chairman of JCBN  
28 May 1998