

# IUPAC Division of Chemistry & the Environment (DCE)

## Minutes

Divisional committee meeting, 2 - 3 August 2002

Hotel Merian am Rhein, Basel

### 1. Attendance and Apologies

Werner Klein (President DP)  
Kenneth Racke (Vice-President VP, Chairman SC-3)  
Patrick Holland (Secretary DS)  
Elke Anklam (TM)  
Leo Klasinc (TM)  
Nicolai Senesi (TM, Chairman SC-1)  
Yehuda Shevah (TM, Chairman SC-2)  
Tania Tavares (TM)  
Richard Cantrill (AM)  
Junshi Miyamoto (Senior Advisor on Problems of the Environment)

Apologies: Patrick Dysseler (TM), Willie Peijnenburg (TM), Don Wauchope (AM), Alan Felsot (AM), Janet Scott (NR - Australia)

### 2. Minutes

The minutes of the divisional meeting at the Brisbane General Assembly, July 2001 were accepted. Correction:- the date in header of document should be July 2001.

### 3. Terms of Reference

The terms of reference were revised in 2001:

*Through its internationally recognized membership and project teams, the DCE will provide unbiased and timely authoritative reviews on the behaviour of chemical compounds in food and the environment. The DCE intends to undertake both fundamental and applied chemical studies aimed at solving environmental problems and enhancing the quality of food. In this way DCE will contribute to global sustainable development.*

There was some comment and discussion as to the name of the division and how well it and the ToR summarised the work actually carried, especially with respect to food chemistry. The suggestion (Anklam) was that consumer safety be more explicit. It was agreed that the name and ToR will be reviewed by division members and any suggestions for changes will be discussed and formally agreed at the Ottawa G.A, 2003.

### 4. Membership of the Divisional Committee 2003-2005

The 2002/03 edition of the IUPAC Blue Book and the IUPAC web-site detail the current elected membership of the division committee (DC) and the composition of the four sub-committees. It was noted that the web-site membership information requires updating with the chairmanship for the Sub-committees on Chemistry of Environmental Compartments (Yehuda

Shevah) and on Crop Protection Chemistry (Kenneth Racke). Note: that the term Advisory Committee is preferred by the later team.

IUPAC rules require elections for all members of divisional committees to be held every 2 years. Thus a new election will be required before the end of 2003 to provide the DC for 2004-2005. Candidates for the positions are to be solicited and approved by the Nominating Committee (NC, see below). For the first phase of choosing the 10 TM positions, including President (DP), Secretary (DS) and Past President (PP)/Vice President (VP), and the 7 AM positions, the electorate is all members of the division (per Blue Book) plus project leaders. Those elected to these 17 positions then select the President, Secretary and PP/VP, although in practice the DP and PP have been pre-determined (a VP will supplant the PP in the second 2-year term of the DP). Membership of the sub-committees is decided by the TM/AM representatives and approved by the DC committee. The basic rule is that TMs and AMs can only serve for a maximum of 4 years in those capacities. In terms of the forthcoming election:

- Racke will stand as TM/VP for ratification as new DP to end 2007;
- Klein will stand as TM for ratification as PP to end 2005;
- Anklam, Dysseler, Klasinc, Peijneburg and Senesi will stand for confirmation as TMs to end of 2005;
- Holland, Shevah and Tavares have completed their allowable 4 years and can only serve as executive (DP, VP or DS). Therefore at least 2 new TMs are required;
- The 6 current AMs are to be confirmed to end of 2005 (van Leeuwen eligible?);
- DP and VP to request from Bureau that Dr Miyamoto be offered the continuing position of Senior Scientific Adviser to DCE in addition to his Bureau responsibilities.

National Representatives are nominated by National Adhering Organisations and the new Div. Committee selects the best candidates (maximum of 6).

It was agreed that the DCE Nominating Committee would be chaired by Dr Miyamoto. He and the VP are to agree on two further Div. members and two external members (suggestions included past DCE members: Miriam Waldman, Al Pohland, Sam Page, R. van Grieken, Erich Dorn). The NC will solicit candidate nominations and vet them for suitability (mainly experience) before submitting the list of names and short-form CVs to the Bureau to conduct the formal TM/AM election (mail/e-mail). The following timetable was agreed for formation of the DC for 2004/2005:

<u>Action</u>	<u>Completion Date</u>	<u>Responsibility</u>
Formation of 5 member nominating committee	15 Dec. 2002	J.M., VP
Solicit nominations for 10 TM & 7 AM positions	31 March 2003	NC, DC, Bureau
Receipt of nominations	30 April	NC
Selection of candidates	31 May	NC
Distribute ballot papers	31 June	Bureau
Count ballots, complete election	31 July	Bureau
Confirm Executive positions	12 August	DC at Ottawa GA
Solicit, select and confirm NR positions	15 September	Bureau, DP, DC

## **5. Divisional operations**

There was extended discussion and debate on how best the DC could facilitate its decision making on projects so as to progress new proposals more quickly through the system and monitor existing projects.

### 5.1 New Projects

Richard Cantrill agreed to take on the position of New Projects Coordinator. He will work with Bureau (Fabienne Myers), proposers of new projects, DP and DS to oversee all DCE project proposals through the process of review/revision/approval. The key requirement is to ensure timely responses by DCE after the external reviews have been received. It is a key responsibility of each committee member to make full and considered responses to all project proposals forwarded to them. Effective evaluation of new projects by DCE would be assisted by a concise set of marking criteria and a timetable for completion of the process for each project.

*Action:* DS to revise the sheet on the project approval process (attached) and prepare a draft criteria/score sheet for project evaluation (attached). Comments for revision to DS by Nov.02

It was agreed that evaluation of new projects would be more efficient and fairer if groups of proposals were received together rather than first-come first-served as at present. Therefore a call for new projects for funding in the 2004/05 biennium will be made for review and evaluation prior to the 2003 GA in Ottawa where final selection and budget decisions will be made. Agreed timetable:

- 1 Nov. 2002 Call for new project proposals (DCE newsletter)
- 15 Mar. 2003 Deadline for submission of new project proposals to Secretariat, copied to DP and DP. Normally would expect a proposal to have had preliminary checking by SC Chairman and other interested parties.
- 1 May 2003 Completion of external review process (overseen by Bureau).
- 1 June 2003 Completion of internal review process by DCE (overseen by Project Coordinator). Reviews and comments sent to project proposers.
- 1 July 2003 Revised proposals submitted and circulated to DC members and to Bureau Project Committee (where applicable) for their final evaluation.
- August 2003 DCE meeting at Ottawa GA. Final selection and budgeting.

### 5.2 Project Progress

It was also agreed that each Div. Committee member would take on the responsibility of Project Champion (PC) for particular projects in their area of specialisation. Often the PC will be the sub-committee chairman but another TM/AM may also be assigned this function. The PC will work with project leaders to regularly review project progress with respect to outcomes and budget, and to facilitate provision of short progress reports and articles (Chem.Int, DCE newsletter).

*Action:* SC chairmen, DS and VP to make provisional assignments of PCs.

### 5.3 DCE Newsletter.

The DS will produce further newsletters on Divisional matters along the lines of the May 2002 issue. More content on activities rather than process is required to meet the needs of a more general audience. In particular we require short progress reports on interesting projects and summaries of any key outcomes e.g. recommendations. Some of this information can be recycled/re-edited for use in Chem.Int. and DCE web-page. Length to be kept to 2 pages A4 with e-mail distribution but perhaps with a glossier, colour format.

*Action:* Content is solicited for an issue in November. Deadline with DS: 15 October 2002.

### 5.4 DCE Web-page

More informative and updated content is required on the IUPAC site either through links to

other relevant web-sites or new info on the IUPAC server. Leo Klasinc will take up this issue with Bureau (Fabienne Myers), with particular reference to the atmospheric chemistry web page (see old projects below).

*Action:* Suggestions to Leo copied to DP and DS re potential new links or information.

## 6. Projects completed or abandoned since Brisbane GA

Project No.	Title	Team Leader	Cooperations	Status/Actions
610/**/**	The Biogeochemistry of Iron	D. Turner, K. Hunter	SCOR	Completed. Wiley book series No.7. Publ. 2001
610/**/**	Interaction Between Soil Particles and Microorganisms	P. Huang, JM. Bollag, N. Senesi	Several non- IUPAC contributors	Completed Wiley book series No.8. Publ. 2002
620/12/89	Popular Articles on Local Env. Problems (for Chemistry International)	O. Hertel, YH.Zhang, L. Klasinc		Final article from T.Tavares, Sept 02. Terminate
620/25/95	Photochemical Reactions of Coordination Compounds in the Atmosphere	N. Bazhin	See project 990331/ 600/00	Terminate. Manuscript incl in Tel Aviv workshop proceedings
660/26/97	Oestrogenic Substances in the Environment	J. Lintelmann	640	Completed In press PAC
650/94/97	Collaborative study – aflatoxin M1 in milk	S. Dragacci E. Anklam	Several non- IUPAC contributors	Study completed. Report required (Anklam to follow-up w. Dragacci).
620/11/89 620/23/96	Internet Web page on Atmospheric Chemistry. <a href="http://www.lkkak.irb.hr">www.lkkak.irb.hr</a>	L. Klasinc, J. Slanina	Int. atmos. chem. community	Klasinc to negotiate transfer to IUPAC Web site by 12/02
640/40/97	Mass spectrometric techniques for multi-residue monitoring of pesticides in food and animal feedstuffs	S. Reynolds, E. Carazo		Abandoned. Terminate
650	8 <sup>th</sup> Ed. IUPAC Standard Methods for Analysis of Oils, Fats & Derivatives	Dieffenbacher P. Dysseler		Recommendation to terminate – see below
1999-031- 1-600	Workshop on Atmospheric Deposition, Tel Aviv, Israel, June 2000	R.van Grieken Y. Shevah	630	Completed. Ca 15 manuscripts to be published asap. Shevah to action.
1999-042- 1-600	Int. Workshop on Oils and Fats, Brasil, 2001	R. Lago		Completed. \$3063 remaining in budget

IUPAC standard methods for analysis of oils fats and derivatives. There was detailed discussion on this long-standing project from former commission 650. Although the IUPAC methods have achieved the status of international standards, the 7<sup>th</sup> ed published by Blackwells in the mid 1980's is out of print. Dr Dieffenbacher has carried out a revision to form the basis for an 8<sup>th</sup> edition. In the absence of Dr Dysseler, Dr Cantrill (AM, Technical Dir. AOCS) summarised the issues: i) The revision needs further editing for style; ii) Much of the collaborative study data from Commission studies published in PAC is still not included; iii) a publisher may be difficult to find because the AOCS compendium now includes all the IUPAC methods and validation. iv) a free version of the revision on the IUPAC web site would be in competition with the more complete AOCS publication. Dr Cantrill recommended that the project be terminated and that effectively AOCS would maintain the IUPAC methods (with appropriate acknowledgement). The meeting agreed with this proposal but strongly

recommended that AOCS put say 10-20 of the most commonly used methods on the IUPAC website with links to AOCS for those wishing to purchase the full AOCS compendium.

## 7. Current approved projects

Project No.	Title	Team Leader	Cooperation	Budget Unspent	Status/Actions
				3 July 02	
610/42/97	Physicochemical Kinetics and Transport at Chemical-Biological Interfaces	Koester, van Leeuwen	Several non-IUPAC contributors	-	Wiley book series No. 9. Final meeting by Dec.02 for publ. early 2003.
1999-033-1-600	Glossary of Terms on Atmospheric Chemistry (revision)	S. Schwartz, J. Calvert	Widespread in atmos. chem. community	-	On atmos. chem. website. Completion by 31/12/02. Requires a meeting.
630/18/93	Minimum requirements for reporting analytical data from environ. samples.	H. Egli (630)	With 620		Completion of second draft for meeting, October 02
630/24/95	Solute Movement in Soils with Potential Rapid By-Pass Movement	W. Kördel (630)	With 640		Advanced draft available.
1999-009-1-600	Pesticide residues in food - acute dietary exposure	D. Hamilton, R. Dieterle, C. Harris	CODEX, JMPR	\$2418	Final draft and recommendations to be discussed July 02.
1999-010-1-600	Mycotoxin methods for developing countries	E. Anklam	Coord by EC Ref. Lab. FAO/IAEA	-	First round completed. Second round underway
1999-012-1-600	Biosensors for Monitoring Environmental Pollutants:	Y. Shevah (630)	130 & V	-	Not approved Withdrawn
1999-013-2-600	In-situ Treatment of Polluted Soils	Mandelbaum M. Sadowski	640 - Katayama	\$5000	First draft, July 02. Shevah to check
1999-014-2-600	Airborne & Remote Sensing of Water Quality	A. Dekker		\$4255	Draft avail.? Shevah to check progress
1999-017-1-600	Regulatory limits for pesticide residues in water	D. Hamilton R. Dieterle		-	Final report in-press PAC 02.
1999-030-2-600	Workshop on Local air Pollution in Developing Countries. China, Dec.01	YH. Zhang L. Klasinc	IOCD, WHO	\$1800 - after Tavares expenses	Successful workshop held. Finalise outputs by Dec.02 (Klasinc)
1999-032-1-600	Assessment of human exposure to outdoor pollution	O. Hertel		-	Completed without funding. Shevah to check report status.
1999-034-1-600	Local Radiation Balance: Influence of Aerosols	J. Slanina	EU, ECN	\$1,162	Complete remaining work in 2002. Klasinc to report.
1999-041-1-600	Bioavailability of xenobiotics in soil	N. Katayama	SC-2	\$5500	First draft of report Aug. 02
2000-016-1-600	Int. Symposium on Endocrine Active Substances. Nov. 02	J. Miyamoto	SCOPE ICSU	-	See report below
2001-022-1-600	Global availability of information on pesticides	K. Racke,	FAO/IAEA	\$6000	Underway
2001-023-1-600	Spray drift: assessment and mitigation.	A. Felsot		\$6000	Underway
2001-039-1-600	Pest management for small-acre crops-global approach for crop protection chemistry	R. Wauchope		\$9,345	Underway

## 8. New Projects (proposals in system)

The following projects were submitted to the Secretariat between July 2001 and July 2001.

Project No.	Title	Leader	Cooperation	DCE budget assigned	Status/Actions
2001-024-2-600	Impact of transgenic crops on the environmental impact of agrochemicals	Kleter, H. Kuiper		\$10,000	Approved by DCE. Seeking Bureau funding (Racke to draft)
2001-026-1-600	Use of reference soils for testing fates & effects of chemicals	W. Köedel	SC-4	\$6,000	Approved by DCE, subject to revision including countries outside EU (Japan, USA)
2002-011-1-600	Int. Workshop on Fats & Oils, Morocco	P. Dysseler	AOCS R. Cantrill	Initiate with \$3063 from prev. workshop. Further funds in 2004?	Revise proposal w. more focus on processing/ dev. countries. Aim for 2004?
2002-012-1-600	Oils & Fat Processing – use of AOACS training course manual	R. Cantrill	AOCS		Combine with above workshop
2002-13-1-600	Validation of ICP method for trace elements in fats	R. Cantrill	AOCS, AOAC, EU Ref. Lab., Brussels	\$5,000 (prov.)	Proposal to be revised to reflect validation and sample prep elements

## 9. New Projects (proposals in preparation)

Title	Leader	Cooperation	Provisional DCE budget	Status/Actions
Colloids in Natural Waters	D. Turner SC-1	SCOR	\$2000 (from Royalty fund?)	SCOR agree to joint funded project. Full proposal Sept. 02.
Fractal Structures and Processes in Environ. Chemistry	N. Senesi SC-1		Will need full funding.	Aimed at Wiley book. 6 chapters defined. Full project proposal Dec. 02
Evaluation of Arsenic Contamination in Water and Remediation Options.	H. Garelick SC-2			Very topical. Should be progressed. Shevah to check status of full proposal
Sampling and data handling for chemistry of the atmosphere	T. Tavares SC-2			Proposal to be developed for discussion during 2002
Autocatalytic processes in the environment	L. Klasinc SC-2			Proposal to be developed for disc. during 2002
Harmonisation of Data Requirements and Evaluation – Workshop, Korea, October 2003	K. Racke SC-3	KRIT	\$5000	Proposal tabled 3/8/02. Minor revision and submit by end August-02
Environmental and	A. Felsot			Proposal to be developed

health implications of inert ingredients in pesticide formulations.	SC-3			for discussion during 2002
Harmonized approaches to assessment and mitigation of agrochemical exposure in agricultural workers.	G. Stephenson SC-3			Proposal to be developed for discussion during 2002
Development and registration of reduced risk agrochemicals.	K. Racke SC-3			Proposal to be developed for discussion during 2002
10 <sup>th</sup> IUPAC Symposium on Mycotoxins & Phycotoxins, Baltimore 2004	E. Anklam SC-4	AOAC	Prov. funding from next biennium	Full proposal to be produced by Oct. 02
Simplified TLC systems for quantitative analytical chemistry in developing countries	E. Anklam SC-4	EU Ref. Labs.		Proposal to be developed for discussion during 2002
Validation of methods in food chemistry	E. Anklam SC-4	EU Ref. Labs. AOAC	No funding required	Projects to develop linkages
Nomenclature of aquatic biotoxins	D. Parke SC-4			Potential topic. Anklam to check status

## 10. Interdivisional Projects

### 10.1 Green Chemistry 3/2/99

This project is headed by Professor Pietro Tundo, Division 300 on Organic and Biomolecular Chemistry. Several international symposia have been held, some including published proceedings and the project has gained considerable momentum with industry now being more involved. Dr Miyamoto has provided liaison with OECD who also are supporting activities in this area. DCE agreed to support two new sub-projects under Green Chemistry from Div.300:

2002-028-2 SE Asian and neighbouring countries – Green Chemistry Network  
Task group Chairman – Janet Scott (NR – Australia to DCE)

2002-029-1 An IUPAC coordinated web page on Green/Sustainable Chemistry  
Task group Chairman – Pietro Tundo, David Black (joint)

No financial contribution could be agreed because the DCE budget for current biennium is nearly fully committed. This decision could be reviewed for 2004/05 funding.

*Action:* DP/DS to prepare review comments for Div.300 meeting 14-15 August.

### 10.2 IUPAC/SCOPE Project on Endocrine-Active Substances 2000-016-1-600

Dr Junshi Miyamoto reviewed progress. The Division has a very active role in the project, particularly in Topic 2 - Environmental Fate and Metabolism. Funding has been obtained from SCOPE, IUPAC, industry (ICCA), NIEHS, and the Japanese government for a total budget of \$660k. The IUPAC contribution was \$10k (DCE) and \$15k (Bureau). The 3<sup>rd</sup> circular has been distributed for the international symposium to be held 17-21 November 2002, Yokohama, Japan. Registrations are currently 300+. Poster presentations are still being accepted and there is some funding for support of delegates from developing countries. The culmination of the project will be a large three-volume White Book containing over 50 chapters plus overview recommendations. This will be published by PAC in 2003. The Scientific Advisory Committee is currently reviewing the submitted manuscripts for the chapters.



## 11. Sub-committee Reports

Reports were tabled at the meeting from SC-1 (Prof Senesi, Biophysico-chemical Processes) and SC-3 (Dr Rackes, Crop Protection Chemistry). These reports mainly covered progress with old and new projects and this information is included in section 9 above.

Dr Racke reported on the IUPAC Congress of Crop Protection Chemistry in Basel that immediately followed the division meeting. Registrations were 1200+ and an excellent programme had been organised. \$5,000 was allocated from the Divisional budget towards subsidies for young scientists from developing countries to attend this meeting. It was disappointing Bureau did not provide this support from the fund that was understood to be set up for this purpose. *Action:* The DP is to follow this up with Bureau because the DCE budget will be overspent with this grant.

SC-3 was to meet for 3 days near Basel after the Congress to progress their project work.

## 12. Budget

The process by which funding allocated to DCE was spent was still poorly understood by many members of the Division. In summary, DCE is assigned a total budget for each Biennium - \$68,000 for the period 1-Jan-02 to 31-Dec-03. About 20% of this may be set aside for administrative expenses for the Division e.g. travel and subsistence for titular members to attend the DCE meeting in Basel. The remainder is assigned to new projects. The Bureau Project Committee may assign additional funding to larger, preferably inter-divisional, projects that meet their criteria of broad relevance and quality. Once a project has a budget, this is fixed for the life-time of the project i.e. it does not have to be all spent within the biennium that it is granted. The project leader is responsible for all aspects of a project and has the authority to approve expenditure against that project budget. The Secretariat maintains the accounting records and updates the IUPAC Web-site. Details of project expenditure can also be requested.

*Action:* DS to prepare a summary of the administrative process by which expenditures are approved and paid (attached).

The budget status of existing projects is summarised along with other relevant information on the expanded spread-sheet maintained by DS (attached). Once the current round of new projects is completed there is likely to be little funding left for new projects in 2003. Therefore the planned round of project proposals beginning Nov.-02 will mainly be for funding in 2003.

## 13. International Cooperation.

SCOPE: Dr Miyamoto continues a strong interaction re the endocrine active substances project. This interaction also involves ICCA and NIEHS.

SCORE: Dr Turner (VI.1) is maintaining links with a collaborative project in preparation.

IFCS: Prof Klein has taken over DCE representation for this important WHO body. There is voluminous e-mail correspondence with draft reports.

## 14. Next Meetings

42<sup>nd</sup> General Assembly, 8-17 August, 2003. Ottawa, Ontario. The DCE meetings are scheduled for 9-10 August. SCs are encouraged to look at ways to hold project meetings in Ottawa during the GA to raise the DCE presence and achieve some economies. The IUPAC Congress (general chemistry conference) will also be on in Ottawa during this time.

Split, Croatia and Bari, Italy were suggested as possible locations for the 2004 DCE meeting (Dr Klasinc and Prof. Senesi respectively).