



**ICOH 2006-2008 TRIENNIUM  
MIDTERM SCIENTIFIC COMMITTEE REPORT**

**MIDTERM REPORT  
Covering June 2006 – October 2007**

Note: We are using an identical format for the SC Midterm and Final Reports. Each covers a specified timeframe. **The SC Midterm Report covers June 2006 – October 31, 2007. Please return it no later than December 1, 2007 to:**

Vice President Marilyn Fingerhut [mfingerhut@cdc.gov](mailto:mfingerhut@cdc.gov) and  
Secretary General Sergio Iavicoli [sergio.iavicoli@ispesl.it](mailto:sergio.iavicoli@ispesl.it)

**The SC Midterm Report will be maintained on the ICOH Scientific Committee Virtual Office at [www.icohweb.org/scvo](http://www.icohweb.org/scvo).**

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**Submitted by Scientific Committee:** \_\_Occupational Toxicology (SCOT)\_\_\_\_\_  
**Date:** \_\_December 11, 2007\_\_\_\_\_

**Chairman:** Claude Viau From year: 2003  
Email address: [claudio.viau@umontreal.ca](mailto:claudio.viau@umontreal.ca)

**Secretary:** Maurizio Manno From year: 2003  
Email address: [maurizio.manno@unina.it](mailto:maurizio.manno@unina.it)

**SC Website URL:** None

**Other SC Means of Communications:** Emails and announcements on ICOH Website

**Focus and aim of Scientific Committee:** The main focus of the committee is to promote research in biological monitoring and the sound use of biomonitoring as part of a prevention strategy in both workplaces and the general environment. Biomonitoring here includes all three types of biomarkers: exposure, early biological effects, and susceptibility.

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**PART I – ACTIVITIES: Business meetings, Conferences, Seminars and Workshops  
Midterm Report: June 2006-September 30, 2007**

*Please note collaborations with other SCs, WHO, ILO and NGOs.*

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**1) Business meeting:**

Venue: Milan

Date: June 14, 2006

Number of attendees: 6

Date report sent to VP Fingerhut (Please use Business Report form in SC Virtual Office at <http://www.icohweb.org/scvo/>):

SCOT Business Meeting Report  
FMC Center, Milan, 14 June 2006 (13.00-14.15)

**Agenda**

1. Welcome by current Officers
2. "Report on past scientific activities held during triennium 2003-2006:
  - a) ISBM Meeting in Heidelberg, Germany, Sept. 2004
  - b) Special session on Variability in BM, Milan, June 13, 2006
  - c) ACOTox, Anacapri, June 8-10, 2006 (cancelled)
3. Report on planned scientific activities during Triennium 2006-2009:
  - a) ISBM Meeting in Beijing, China, Sept. 2007
  - b) ACOTox to be planned
  - c) Preliminary discussion with FIOH and INRS
4. Position paper/Consensus document to be developed on the role of BM in occupational health prevention
5. Request by ICOH officers to consider merge/networking of SCs over triennium 2006-09
6. SCOT Membership: update, dues and new members
7. Election of SCOT Officers for Triennium 2006-09

**Report**

Participants: J. Edwards (candidate member), M. Ikeda, M. Jakubowski, M. Manno, I. Naik (candidate member), C. Viau

(points 1 and 2.) The President, after welcoming those present, reports briefly on the events accomplished as they are listed in the Agenda, i.e. the ISBM meeting in Heidelberg, Germany, Sept. 2004, the Special Session on Variability in Biological Monitoring in ICOH 2006, Milan 13 June, 2006 and on the Advanced Course in Occupational Toxicology, which had to be cancelled due to the small number of those registered. A Report is distributed among the participants (*Enclosure 1*).

(point 3.) The following activities were proposed for the next triennium 2006-2009:

a) A new ISBM meeting, the 7<sup>th</sup> of the series, is being organized by Dr. Sheng Wang, in collaboration with the SCOT President and Secretary, in Beijing, China (2007). ISBM-7 will be organized in collaboration with the SC on the Toxicology of metals and, possibly, with other SCs, as recommended by the ICOH President at the pre-congressual SC meeting.

b) A proposal by I. Naik to hold another ISBM meeting in South Africa has also been discussed and different options/times were considered:

1<sup>st</sup> option: a traditional meeting (ISBM-8) as a satellite of ICOH-2009

2<sup>nd</sup> option: a traditional ISBM in 2010 (3 years after ISBM-7 in Beijing)

3<sup>rd</sup> option: a large session on BM at ICOH 2009

A substantial financial support would be needed for the 2<sup>nd</sup> option, and some support probably also for the 1<sup>st</sup> option.

J. Edwards proposes to hold a mixed event: one joint session with another SC in the last day of ICOH 2009 and another one-day session just for SCOT members.

The President proposes not to organize an ISBM, either as a satellite or a separate event in South Africa, and to rather organize one or more sessions within ICOH 2009. After discussion, the members agreed with this proposal. Members further recommended that overlapping of activities (re: timetable) between similar SCs should be avoided in ICOH 2009. As a member of the scientific committee of ICOH 2009, I. Naik said she would convey this message, so that scientific activities related to SCOT within ICOH 2009 will be promoted and planned well in advance. The SCOT officers are also considering the organization of educational activities in BM in conjunction with ICOH 2009.

Prof. Ikeda proposes a joint participation of SCOT and the SC on Toxicology of metals at ISBM-7 in China. In fact, an invitation has already been made to the Chair of the latter committee.

c) Web site: The President reports that at the Helsinki midterm meeting in January 2005 and during the general ICOH SC meeting in Milan on Sat. 10, 2006, participants were informed by the ICOH SG that a uniform template will soon be prepared for use by the SCs. It might be appropriate to set up an independent web site/page, including mission, short reports, future activities and events, list of members, etc.

(point 4.) The proposal of preparing a consensus document (C.D.) on "Biological Monitoring in OH" is presented by the President and a draft synopsis prepared for the meeting by the Secretary is distributed among the participants for comments and suggestions (*Enclosure 2*). Once available, the C.D. should then be sent to the ICOH Board and Officers together with a proposal for a short position paper to recommend and promote the use of scientifically validated and ethically sound BM practices among the OH community.

(point 5.) Participants discussed the recommendation by the ICOH President that SCs should increase collaboration with each other and, where appropriate, consider merging. The participants agreed that interaction rather than merging would be more effective to promote future SCOT activities. Interaction should be with a number of SC, such as Industrial Hygiene, Toxicology of metals, Pesticides and others, and probably also with Governmental Agencies on specific issues. The Secretary underlined the need for SCOT to expand its interest and activities also to aspects of Occupational Toxicology other than BM (for example Risk Assessment, Risk Communication, etc.).

(point 6.) The current list of members provided by the ICOH SG is distributed to the participants. This list is being updated in collaboration with the SG. More than 50% of members in this list are in good standing, but the percentage is higher when considering that several members are no longer active. The updated list will be circulated to old and new members (a few applications have been made).

(point 7.) The participants are informed of the SC officers election procedures, as from the ICOH newsletter. However, no new candidates have been proposed for Presidency. Therefore the presents approve by acclamation the current officers for the next triennium.

*SCOT Secretary*  
Maurizio Manno

*SCOT Chairman*  
Claude Viau

### **SCOT Officers' Report (*Enclosure 1*)**

#### **Members**

The update of the Members list is still underway due to difficulties in getting in contact with some of the Members. The ICOH 2006 Participants' list will help to update the SCOT Member list. An updated List is expected to be finalized shortly after ICOH 2006. As to the fee, approximately one third of the Members are in good standing order, one third are not, and one third could not be reached or contacted by the Secretary nor by the ICOH SG. Considering SCOT vs. ICOH

membership, only a few new applications have been or will probably be presented. However, according to previous discussion/decisions, this process was considered to be adequate to guarantee a physiological turn-over of Members. Also, new young Members are welcome.

## Activities

- **Scientific events:** the 6<sup>th</sup> Int. Symposium on Biological Monitoring in Occupational and Environmental Health (ISBM-6) took place in Heidelberg, 6-8 Sept. 2004. The 1st. Advanced Course in Occupational Toxicology (ACOTox) to be held in Capri, June 2006, had to be cancelled due to the insufficient number of participants.

- **Future scientific events:** ISBM-7 in Beijing, China (2007). The SCOT President and Secretary have been collaborating with Prof. Sheng Wang, organizer of ISBM-7, in the early decisions and feasibility steps. A Preliminary Announcement of ISBM-7 will be distributed in Milan. Discussion about future SCOT events is under way (France-Finland, South Africa).

- **Business meetings:** two business meetings and a midterm meeting took place since the 2003 Iguassu Congress: Iguassu (Feb. 2003), Heidelberg (Sept. 2004) and Helsinki (Jan. 2005), respectively.

- **Position Papers/Consensus documents:** the possibility of producing a consensus document on the principles, methods and interpretation of biological monitoring data in OH is being considered (synopsis attached). This document may become the scientific basis for an ICOH position paper on the use of BM in OH.

## Web site

The official ICOH website has been renewed and updated but the possibility of hosting a SCOT home page and of making a uniform web template available for all SCs' home pages is still being discussed. In the meantime SCOT could consider setting up its own website or making use of existing websites.

## Finances

SCOT has no budget of its own and all activities have been self supported so far. A request to ICOH SG of a specific support of special events such as ISBM-7 in China, ACOTox, etc. could be considered.

## Preliminary Synopsis for a Consensus Document on Biological Monitoring (**Enclosure 2**)

*Introduction (why an ICOH Consensus Document on BM is needed, comments on other existing documents on BM)*

- Definition and Significance of BM on OH
- Advantages/disadvantages of BM (e.g.: vs. Environmental Monitoring, vs. Health Surveillance, etc.)
- Aims of BM (e.g.: individual vs. group, exposure vs. effect, research vs. health protection, etc.)
- Type of Biomarkers (BMK), *i.e.* definition, role and significance of:
  - Exposure BMK
  - Effect BMK
  - Susceptibility BMK
  - Early disease BMK

## Methods of BM

- *Collection, processing, and storage of samples*
- *Analytical methods (use, advantages, disadvantages, precision, sensitivity, specificity, quality assessment, limitations, etc.)*

- *Statistics*

#### Interpretation of BM data

- Variability (sampling, analysis, exposure-dependent, biological)
- Validity and predictive value
- Individual vs. group BM
- Toxicological significance and limitations in the interpretation of BM data
- Use for risk management (job fitness, etc.)
- Use for health management
- Limit and reference values:
  - ✓ Exposure limits (BEI®)
  - ✓ Health based limits
  - ✓ Reference values
  - ✓ Guideline values
  - ✓ Etc.

#### Ethical considerations (in planning, performing, and interpreting the results of BM)

- Risk/benefit (*what? how much? to whom? etc.*)
- Informed/written consensus, awareness, etc.
- Information/communication/perception
- Confidentiality, privacy, etc.
- Use of BM data for risk management

#### Practical recommendations (e.g. informed consensus form, etc.)

References (only general references from the peer review literature or from recognized scientific International or National Organizations should be quoted)

#### Annexes

- List of definitions
- List of abbreviations
- List of Scientific journals in BM
- List of scientific institutions with BM activities
- List of current BMK

#### 2) **Business meeting:**

Venue: Beijing

Date: September 11, 2007

Number of attendees: 11

Date report sent to VP Fingerhut (Please use Business Report form in SC Virtual Office at <http://www.icohweb.org/scvo/>):

SCOT Business Meeting Report  
September 11, 2007 (12:30) – Beijing, China

#### **Agenda**

- 1) Welcome from the Chair – Claude Viau
- 2) Minutes from the business meeting held during the ICOH Congress in Milan, June 2006 – Claude Viau
- 3) The Beijing ISBM'07 meeting – Claude Viau and Maurizio Manno
- 4) Membership within SCOT – Maurizio Manno
- 5) The South Africa ICOH meeting in March 2009 – an update by Inakshi Naik

- 6) The next ISBM meeting – a proposal from Finland – Juha Laitinen
- 7) SCOT policy towards Scientific Committees – Maurizio Manno and Claude Viau
- 8) A position paper on biological monitoring
- 9) Other issues

## **Report**

Present: C. Viau (Chairman), M. Manno (Secretary), M. Nordberg (Chair, SCTM), C. Colosio (Chair, SCRH), J. Edwards, M. Ikeda, J. Laitinen, L. Lowry, I Naik, G. Nordberg, J. Roh,

### 1) Welcome from the Chair

Claude Viau welcomed the delegates and introduced the meeting. Since one of the aims of the symposium were enlarging the ICOH membership, Prof. Viau decided to keep the meeting open to any colleague interested in its activities, even to non ICOH members. Also the Chairs of the other two SC participating in ISBM-2007 were invited, in order to promote the largest information exchange and to identify opportunities for further collaboration.

### 2) Minutes from the business meeting held during the ICOH Congress in Milan, June 2006

Claude Viau asked M. Manno to report on the minutes of the Milan business meeting. The minutes were read by the Secretary and approved by the participants.

### 3) The Beijing ISBM'07 meeting

Claude Viau introduced the issue by reporting on the successful collaboration among the three SCs and by thanking the ISBM-2007 organizer, Prof. S. Wang, for his work and efficiency.

### 4) Membership within SCOT – Maurizio Manno

The Secretary informed that a new application has been submitted previously by Ivo Iavicoli to become a member of SCOT and six new more applications have been submitted more recently to SCOT by John Edwards (Australia), Ina Naik (South Africa) and four Applicants from Japan: Prof. H. Igisu, Univ. Occup. Env. Health, Kita-kyushu, Professor T. Nakajima, Nagoya Univ. Sch. Med., Nagoya, Dr. G. Ichihara, Associate Prof., Nagoya Univ. Sch. Med., Nagoya, and Prof. T. Takebayashi, Keio University Sch. Med., Tokyo. After evaluation of the candidates' CV by the SCOT officers all the seven new applications have been accepted. Prof. Ikeda suggested that Prof. Sheng could propose one or two candidates from China with the recommendation that SCOT members be also ICOH members. Larry Lowry raised the issue of what should be done with inactive members. Claude Viau reminded the rule established by previous officers, i.e. those members not attending at least one out of two consecutive ISBMs should be cancelled. The rule, however, is difficult to follow. Besides, useful participation other than attending the symposia (such as contribution to scientific documents, the web site, the Newsletter, etc.) could be envisaged to be performed by members to validate their membership.

Monica Nordberg, based on her experience made as an officer of SCTM, suggested sending a letter to inactive members asking them to confirm their interest in SCOT. Those not confirming their interest or not replying could then be removed from the list of active members.

### 5) The South Africa ICOH meeting in March 2009 – an update by Inakshi Naik

I. Naik (National Institute for Occupational Health, Johannesburg, South Africa) provided information and presented a promotional DVD for the ICOH 2009 congress. She also reported that the President of ICOH-2009 is planning to have scientific sessions of run by SCOT during the congress, but not as a satellite list of topics on occupational toxicology and biological monitoring. An official proposal by ICOH of scientific sessions of ICOH-2009 has been sent by the ICOH vice-President Dr. Marilyn Fingerhut to ICOH SC officers in July.

6) The next ISBM meeting – a proposal from Finland – Juha Laitinen –

A proposal had been sent to the SCOT Chair and confirmed by Dr. Laitinen at this meeting to organize the next ISBM in September 2010 in Finland. Another proposal has been presented during the Beijing Business Meeting by Dr. Edwards to organize ISBM-8 in late November-early December 2010 in Australia. The proposed topics for the Australian symposium are: nanomaterials, communication of Biomonitoring results and "omics". The SCOT Secretary will provide the proponents with a copy of the "Guide to organize an International Symposium on Biological Monitoring" prepared recently by Siu Chan, Claude Viau and Maurizio Manno and already used by the Chinese Colleagues for the proposal of ISBM-2007 in Beijing. The proposals will have to be sent to the SCOT Secretary to be examined by the present and the past SCOT officers.

The last three issues ("SCOT policy towards Scientific Committees", "A position paper on biological monitoring" and "Other issues") were not discussed due to time limitation.

The Meeting is closed at 14:00

Prepared in October 2007

SCOT Secretary  
Maurizio Manno

SCOT Chair  
Claude Viau

**Conferences, Seminars, Workshops, Courses, etc:**

*(please fill in the tables)*

<b>(1) Name of the event:</b>	7 <sup>th</sup> International Symposium on Biological Monitoring in Occupational and Environmental Health (ISBM)				
<b>Type of event:</b>	<b>Conference</b>	<b>Seminar</b>	<b>Workshop</b>	<b>Course</b>	<b>Other</b>
	X				
<b>Date:</b>	September 10-12, 2007				
<b>Venue:</b>	Jiu Hua Resort and Convention Center, Beijing, China				
<b>Organizers:</b>	Professors Sheng Wang, Claude Viau, Maurizio Manno Monica Nordberg and Claudio Colosio				
<b>Co-organizers and Collaborators: Please describe roles.</b>	Collaboration between 3 ICOH Scientific Committees: Occupational Toxicology, Toxicology of Metals and Rural Health. Thematic presentation for each of the 3 days of the Symposium was linked with each of the SCs' focus.				
<b>Number of participants:</b>	170				
<b>Publication of proceedings:</b>	See details below				
<b>Book of abstracts:</b>	Prepared by the local Organizing Committee				
<b>Book of selected proceedings:</b>					
<b>Special issue of peer reviewed journals:</b>	Arranged with Toxicology Letters – to follow				
<b>Assessment of success:</b>	No formal process set up, but numerous positive comments were received in person or by email from the participants				

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**PART II Midterm Report: SC Products and Collaborations June 2006 – September 30, 2007  
Publications, Guidelines\*, Position Papers\*, etc**

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**Publications, Proceedings, Guidelines\*, Position Papers\*, etc.** Provide title, authors, full citation. SCs are encouraged to produce ICOH Guidelines\* and Position Papers\*. \*Guidelines and Position Papers must be approved by the ICOH SC Vice Presidents, Secretary General and President.

Position Paper (still in draft format): “Biomonitoring for Occupational Health & Risk Assessment”, compiled by Maurizio Manno and Claude Viau in collaboration with Larry Lowry, Antonio Mutti, Monica Nordberg, Claudio Colosio Sheng Wang, Caroline Couture and Aurélie Berthet.

This document was distributed to participants of the 7<sup>th</sup> International Symposium on Biological Monitoring in Occupational and Environmental Health (ISBM) held in Beijing in September 2007. A special session within the Symposium was devoted to a discussion of the contents of this document. It was subsequently distributed by email to SCOT, SCTM and SCRH members and as of November 20, 2007, comments were still collected.

**Cooperation with other Scientific Committees:** (If cooperation in a Conference not listed above, provide title, dates, location and role of each SC. Provide relevant details of other collaborations with SCs.)

SCOT is proud to be collaborating with SCTM and SCRH on an ongoing basis. Exchange of information and invitation to collaborate to the development of specific scientific events is becoming the hallmark of our 3 SCs and we look forward to more collaboration.

**Participation and support to WHO – ILO meetings and or publications:** (If cooperation in a Conference not listed above, provide title, dates, location and role of each. Provide relevant details of other collaborations with WHO and/or ILO.)

**Cooperation with non-ICOH organizations:** (If cooperation in a Conference not listed above, provide title, dates, location and role of each. Provide relevant details of collaborations other than conferences.)

**Any other points of relevance:**

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**PART III Midterm Report: SC PLANS for second half of Triennium and for ICOH 2009:  
October 1, 2007 – March 30, 2009**

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**Planned business meetings, conferences, seminars:** (provide title, location, date if possible)

We have initiated discussions with 2 groups (from Finland and Australia) to organize the 8<sup>th</sup> International Symposium on Biological Monitoring (ISBM) in 2010.

**Planned collaborative Activities with other ICOH Scientific Committees:** (Provide Conference title, dates, location and role of each SC. Provide relevant details of other collaborations with SCs.)

Examples include collaborative organization of oral paper sessions within ICOH 2009, e.g.: “Gene-Environment Interactions” (along with SCTM) “Ethics in Occupational Health” (as collaborator along with SCHSR, SCTM, SCHSREOH). Further contribution has been initiated with SCRH for the organization of the 17th International Congress of Agricultural Medicine & Rural Health to be held October 13 - 16, 2009 in Cartagena das Indias, Colombia.

**Planned collaborative Activities with other (Non-ICOH) Organizations:** (Provide Conference title, dates, location and role of the SC. Provide relevant details of collaborations other than conferences.)

**Planned Publications, Position papers, etc.:** (Provide title, authors, timeframe, publication, if known)

The position paper alluded to above and discussed at the 7<sup>th</sup> ISBM will be completed before the March 2009 ICOH in South Africa.

**Planned Scientific Contributions to ICOH 2009:** (Be specific: List title of scientific sessions, speakers, abstract reviewers, business meeting, etc.). SCOT direct involvement as principal organizer or contributor to:

- Oral session T8: Biological Monitoring and Biomarkers: New Methods and Applications
- Oral session T18: Ethics in Occupational Health
- Oral session T21: Gene-Environment Interactions
- Oral session T48 : Advances in Occupational Toxicology
- Special session : Exposure to genotoxic chemicals and biomonitoring
- Special session: The role of biomonitoring in occupational health risk assessment

**Any other points of relevance:**

**We want to understand and share widely the value and impact of the work of the Scientific Committees on improving global occupational health. Please look back into the past and provide an assessment.**

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**Midterm Report:** Please assess the success of the SC and its influence in improving global occupational health as a result of the work *prior to* the current Triennium. Give examples where possible.

As will be developed in the Position Paper, Biological Monitoring, which is one of the central SCOT activities, is a key tool for the prevention of acute or chronic intoxications in the workplace. By contributing to the advancement of the science of biomonitoring and its related ethical aspects, SCOT is making a major contribution towards the control of adverse effects due to chemicals.

Furthermore, the fruitful collaborations established with 2 other scientific committees (SCTM and SCRH) contribute to the multidisciplinary approach that is required nowadays to tackle occupational threats to the physical integrity of workers.

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