



European Collaboration in Research and Technology

COST Action 633:

Particulate Matter: Properties related to health effects



Particles and Health

– State of the Research and Policy Implications –

Public Conference

Wednesday, May 16, 2007

Auditoire Alexandre Yersin, University Hospital Center, Lausanne

9:30 – 15: 30 Researchers present the state of the research in Europe

16:00 – 17:30 Policy makers and researchers discuss the policy implications

Organizers: Dr. Michael Riediker, IST Lausanne, Switzerland ¹⁾

Prof. Dr. Regina Hitzenberger, University of Vienna, Austria ²⁾

Registration: There is no entry fee. Registration is only required for speakers and poster presenters.

Sponsor: The European COST office in Brussels kindly provides funding for this event.

¹⁾ Swiss COST 633 Delegate and Head of Research Group Particles and Health
Institut de Santé au Travail, IST, rue du Bugnon 19, CH-1005 Lausanne (Suisse/Switzerland)
Tél. +41-(0)21-314 74 21 / Fax +41-(0)21-314 74 20 / michael.riediker@hospvd.ch

²⁾ Chair of COST 633 and a.o. Univ. Professor
Institute for Experimental Physics, University of Vienna, Boltzmanngasse 5, A-1090 Vienna (Austria)
Phone: +43-1-4277-51111 / Fax: +43-1-4277-9511 / regina.hitzenberger@univie.ac.at



Programme

08:30-09:30 **Coffee and registration**

09:30-09:35 **Welcome and opening remarks**
Michael Riediker, IST Lausanne, Switzerland

Research about particles and health in Switzerland

9:35 – 10:00 **Keynote: Research about particles and health in Switzerland**
Ursula Ackermann-Liebrich
*Chair Swiss Federal Commission for Air Hygiene
Academic Director, "Swiss School of Public Health + ", Basel, Switzerland*

10:00 – 10:20 **Assessment of Diesel exhaust particulate exposure and surface characteristics in association with levels of oxidative stress biomarkers**
Jean-Jacques Sauvain¹, A. Setyan¹, M. Riediker¹, M. J. Rossi², M. Guillemin¹
¹ *Institute for Occupational Health Sciences, Lausanne, Switzerland*
² *Air and Soil Pollution Laboratory, EPFL, Lausanne, Switzerland*

10:20 – 10:40 **Translocation of particles, effects, and cellular interplay after exposure to fine particles and nanoparticles in an epithelial airway model.**
P. Gehr, B. Rothen-Rutishauser, C. Mühlfeld and Fabian Blank
Institute of Anatomy, University of Bern, Bern, Switzerland

10:40 – 10:50 **Short break**

10:50 – 11:10 **Searching for the mechanisms of interaction between nanoparticles and lung-cells**
Markus Kalberer^{1*}, Marianne Geiser^{2*}, M. Savi², D. Lang², A. Gaschen¹, M. Fierz³, M. Ryser⁴, J. Ricka⁴
¹ *Department of Chemistry and Applied Biosciences, ETH Zurich, Switzerland*
² *Institute of Anatomy, University of Bern, Bern, Switzerland*
³ *Institute for Aerosol- and Sensor Technology, FHNW, Windisch, Switzerland*
⁴ *Institute of Applied Physics, University of Bern, Bern, Switzerland*

11:10 – 11:30 **Assessing long-term exposure to traffic-related air pollution in a large Swiss Cohort (SAPALDIA)**
L-J Sally Liu, D. Keidel, A. Gemperli, M. Hazenkamp, Ch. Schindler, and the SAPALDIA team.
Institute of Social & Preventive Medicine, University of Basel, Switzerland

11:30 – 11:50 **Health effects of air pollution in a large Swiss Cohort (SAPALDIA)**
Thierry Rochat¹, L.-J. S. Liu, S. Downs, E. Zemp, L. Bayer-Oglesby, D. Felber Dietrich, M.W. Gerbase, J.M. Gaspoz, N. Probst-Hensch, U. Ackermann-Liebrich, P. Leuenberger, Ch. Schindler, and the SAPALDIA team.
¹ *Pulmonary Division, University Hospitals of Geneva, Switzerland*

11:50 – 12:55 **Sandwich lunch and poster viewing**



Intermezzo: The petroleum industry perspective

12:55 – 13:15 **Research needs for Health Effects of Air Pollution – CONCAWE recommendations for FP7**

Jan Urbanus

CONCAWE, the oil companies' European organisation for environment, health and safety, Brussels, Belgium

Research about particles and health in Europe and worldwide

13:15 – 13:35 **Overview on the activities of COST633 Working Group 3: source apportionment methods EU**

Mar Viana^{1*}, X. Querol¹, T.A.J. Kuhlbusch², A. Miranda³, M. Vallius⁴, A. Kasper-Giebl⁵, S. Szidat⁶, W. Winiwarter⁷, R.M. Harrison⁸

¹ *Institute of Earth Sciences "Jaume Almera", Barcelona, Spain*

² *IUTA e.V. Duisburg, Germany*

³ *University of Aveiro, Aveiro, Portugal*

⁴ *National Public Health Institute, Kuopio, Finland*

⁵ *Institute for Chemical Technologies and Analytics, Vienna, Austria*

⁶ *University of Bern, Bern, Switzerland*

⁷ *Austrian Research Centers, Vienna, Austria*

⁸ *The University of Birmingham, Birmingham, United Kingdom*

13:35 – 13:55 **Release of particulate material into the atmosphere: quality considerations of PM emission inventories**

Wilfried Winiwarter

Austrian Research Centers – ARC, Vienna, Austria

13:55 – 14:15 **PM and NO₂ at urban sites with different traffic exposure: Curb site measurements in Flemish cities**

M. Van Poppel¹, E. De Dekker², L. Int Panis¹, N. Bleux¹, M. Spruyt¹ and Patrick Berghmans¹

¹ *VITO, Flemish Institute for Technological Research, Belgium*

² *Environmental Department – City of Ghent, Belgium*

14:15 – 14:25 **Short break**



Research about particles and health in Europe and worldwide (Continued)

- 14:25 – 14:45 **Formation of sulphate in concentrated solutions of salts**
Axel Berner¹, J. Turšič² and R. Hitzemberger¹
¹ *Experimentalphysik, Fakultät für Physik, Universität Wien, Vienna, Austria*
² *National Institute of Chemistry, Ljubljana, Slovenia.*
- 14:45 – 15:05 **Size partitioning of airborne particles to compare their proinflammatory effect in airway epithelial cells**
Armelle Baeza-Squiban¹, K. Ramgolam¹, O. Favez², L. Martinon³, H. Cachier², A. Person⁴, A. Gaudichet⁵, F. Marano¹
¹ *Laboratoire de Cytophysiologie et Toxicologie Cellulaire, Université Paris 7, France*
² *Laboratoires des Sciences du Climat et de l'Environnement, Gif sur Yvette, France*
³ *Laboratoire d'Etude des Particules Inhalées, Paris, France*
⁴ *Laboratoire d'Hygiène de la Ville de Paris, Paris, France*
⁵ *Laboratoire Interuniversitaire des Systèmes Atmosphériques, Université Paris 12, Créteil, France*
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- 15:05 – 15:30 **Keynote: Particles and Health in Europe**
Matti Jantunen
KTL-Environmental Health, Kuopio, Finland
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- 15:30 – 16:00 **Coffee break and poster viewing**
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Health effects of particles - the policy makers' perspective

16:00 – 16:30 **Short statements by policy makers:**

Andrej Kobe, EU Commission, DG Environment (CAFE Team) *Note: Dr. Kobe cannot attend due to other obligations. Thomas Kuhlbusch, IUTA Duisburg will present his statement.*

Luc Recordon, National Councilor, Green Party, Lausanne, Switzerland

16:30 – 17:30 **Podium discussion: Implications for policy and research**

- What are the policy implications of the current research
- What are the research needs from the policy makers' perspective
- How can research better be integrated into the policy making processes

Participants (in alphabetical order):

Ursula Ackermann, Prof.

Chair Swiss Federal Commission for Air Hygiene
Academic Director, "Swiss School of Public Health + ", Basel, Switzerland

Peter Gehr, Prof.

Director, Institute for Anatomy
University of Bern, Bern, Switzerland

Matti Jantunen, Prof.

National Public Health Institute
Department of Environmental Hygiene, Kuopio, Finland

Luc Recordon, National Councilor and Lawyer

Representative of the Canton Vaud, Green Party, Lausanne, Switzerland

Jan Urbanus, Technical Coordinator

CONCAWE, the oil companies' European organisation for Environmental and Health Protection, Brussels, Belgium

Moderator: Michael Riediker

17:30 – 18:30 **Apéro**

19:00 – 22:00 **Dinner for invited guests**



Poster presentations (sorted by first author):

PM and NO₂ at urban sites with different traffic exposure: curb site measurements in Flemish cities

M. Van Poppel¹, E. De Dekker², L. Int Panis¹, N. Bleux¹, M. Spruyt¹ and Patrick Berghmans¹

¹ VITO, Flemish Institute for Technological Research, Belgium

² Environmental Department – City of Ghent, Belgium

A field campaign to assess air pollution effects on school children health

C. Borrego¹, J. Ferreira¹, M. Lopes¹, J. Valente¹, N. Neuparth², A.I. Miranda¹ and T. Nunes¹

¹ Department of Environment and Planning, University of Aveiro, 3810-193, Aveiro, Portugal

² Faculty of Medical Sciences, New University of Lisbon, Lisbon, Portugal

Particulate air pollution exposure assessment in urban areas

C. Borrego¹, O. Tchepe², A.M. Costa¹, H. Martins¹, J. Ferreira¹ and A.I. Miranda¹

¹ CESAM & Department of Environment and Planning, University of Aveiro, 3810-193 Aveiro, Portugal

² School of Technology and Management, Polytechnic Institute of Leiria, 2401-951 Leiria, Portugal

Generation and analysis of oxidizing model aerosols used in investigations of cell responses to nanoparticle deposition

Annina Gaschen, M. Kalberer

Department of Chemistry and Applied Biosciences, ETH Zurich, Zurich, Switzerland

Relationship between ambient air pollution and daily mortality in the urban area of Katowice – comparison on two periods 1994-1995 and 2001-2002

Malgorzata Kowalska¹, J.E.Zejda¹, L. Ośródk², K. Klejnowski³, E. Krajny², M. Wojtylak²

¹ Department of Epidemiology, Medical University of Silesia, Katowice, Poland

² Institute of Meteorology and Water Management, Katowice, Poland

³ Institute of Environmental Engineering Bases of PAS, Department of Air Protection, Zabrze, Poland

Modelling particulate matter in European COST633 Action member states

A. I. Miranda¹, J. Ferreira¹, C. Borrego¹, T. Kuhlbusch², M. Viana^{3,4}, W. Winiwarter⁵ and M. Ketzel⁶

¹ Department of Environment and Planning, University of Aveiro, 3810-193 Aveiro, Portugal

² IUTA e.V. Bliersheimerstr. 60, 47229 Duisburg, Germany

³ Institute of Earth Sciences “Jaume Almera”, 08028 Barcelona, Spain

⁴ ECN, P.O. Box 1, 1755ZG Petten, The Netherlands

⁵ ARC systems research, 1220 Vienna, Austria

⁶ Department of Atmospheric Environment, National Environmental Research Institute, 4000 Roskilde, Denmark



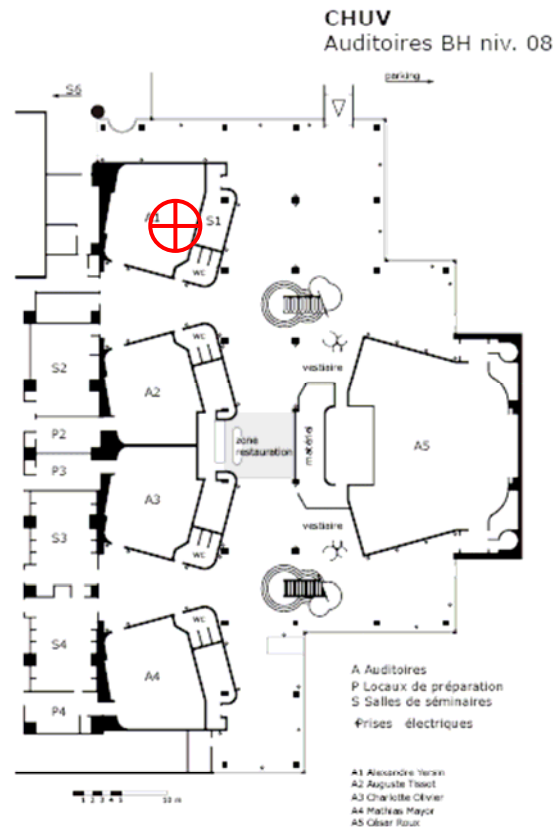
Venue information

Auditoire Alexandre Yersin
University Hospital Center (CHUV)
Lausanne, Switzerland

Access from the train station Lausanne

Take bus number 5 until CHUV, which is near the hospital entry (see plan below).

Hint:
Direct trains run every 30 minutes from Geneva Airport to Lausanne:
Go to <http://www.rail.ch> and use "GVA" as departure or destination



Map of the hospital area – the main entry is marked with a cross, auditoriums are in the east wing near the parking decks (follow the conference signs)

Overview on the auditorium wing
Auditoire Alexandre Yersin is the northernmost hall

(The Institute for Occupational Health Sciences is opposite the bus stop Montagibert - marked IST).