

## Highlight

### ISEA and ISEE awards: Dr Larry Needham, USA Dr Klea Katsouyanni, Greece

The two awardees comment on their research, hopes and expectations.

#### For which major work or research did you receive your prize?

**Klea Katsouyanni:** Under my coordination, a European network was created to study the short-term effects of air pollution: the "Air Pollution and Health: a European Approach" (APHEA) project, which brought together more than 20 research groups from various countries. The results not only alerted European Union leaders but also the general public.

**Larry Needham:** I was nominated for the award because of our work at CDC in biomonitoring, which means the assessment of human exposure to environmental toxicants by measuring them or their metabolites in biological samples, such as blood and urine. We and others have then used these exposure data to describe exposures in the U.S. population and for assessing exposure in epidemiological studies worldwide.

#### How will this reward help you?

**Klea Katsouyanni:** In Europe, joint research is a relatively recent development and the recognition of my work is, I believe, a credit

to European collaborative research and its valuable outputs.

**Larry Needham:** This reward will help me in knowing that our work, coupled with the work of others, is advancing the science of exposure analysis.

#### What else do you need to take this forward?

**Klea Katsouyanni:** The efforts to lower ambient particles' concentration should be intensified. Unfortunately, the new directive proposed by the European Commission is not as ambitious as we expected. A lot more has to be done to better inform the policy makers and the citizens on the effects of air pollution.

**Larry Needham:** In the area of exposure analysis we still have many gaps to fill. We need to learn more about the fate and transport of these chemicals in the environment, the mechanisms of exposure, and human pharmacokinetics of many of the chemicals. The internal dose levels are at the heart of the exposure-effect continuum. We really need to gain insight and increase our ability to better interpret the biomarker data, especially for nonpersistent chemicals.



**Dr Katsouyanni**  
Department of Hygiene and Epidemiology  
University of Athens  
Medical School, Greece



**Dr Needham**  
National Center for Environmental Health,  
Centers for Disease Control and Prevention (CDC), USA



## Conference in numbers

**1250** is the number of accepted abstracts featuring in the programme, excluding the 225 symposia abstracts then raising up to

**1475** accepted abstracts. This exceeds all expectations as the organisers had anticipated only about 700 abstracts.

## Viewpoint



**Daniel Wartenberg, PhD**  
ISEE President  
Robert Wood Johnson  
Medical School  
New Jersey, USA

### Encouraging the use of science in decision-making for environmental health

*With the assault on the environment growing in intensity, it is imperative that scientists around the world respond by joining together to effect change through the development and use of sound science. Holding this year's joint conference in Paris has encouraged broad international participation, offering unusual opportunities to develop collaborations and initiate interdisciplinary projects. And the central role being played by AFSSET, in hosting the conference, has enhanced our working relationships with government scientists and policymakers. The conference promises to be an ideal venue to discuss controversial issues and seek ways to improve environmental quality and health. By holding the ISEE's 18th annual conference in conjunction with the ISEA, the event also epitomizes the joint commitment of environmental epidemiologists and exposure analysts to mutually foster international growth, training and leadership in the study of the environment.*

## Yesterday - Children's Health

### Pollution also affects puberty

Sunday morning, after the plenary on early age exposures, another well-tracked session focused on children's health and environmental chemicals. The room was more than full, mainly of women.

Firstly, according to Dr Woodruff's results of her study on rats, mutagenic chemical exposure during puberty increases cancer potency 3 fold at the adult age.

Then Dr Koifman also showed that high organochlorine exposure from a pesticide factory has an important oestrogenic effect. Indeed his study explained that when blood levels of DDE reach 26.8 ng/mL, young women could get their menarche at the age of nine.



□ Women with menarche showed median age compared to 16, (p<0.000001).  
□ According to be respectively, 40



## Breakthrough

**Manfred Lörtscher**  
**Swiss Federal Office of Transport, Switzerland**

Head of fixed installations, Swiss Federal Office of Transport.  
Expert in several working groups of CENELEC.

Monday, 11am, MM3-0, Electromagnetic Fields



Whether exposure to extremely low frequency magnetic fields is causative for cancer or neurodegenerative diseases is still an unresolved issue. The investigation of the various influences of electro-magnetic fields (EMF) on the human body is an ongoing interdisciplinary topic which involves the fields of physics, statistics and medicine. Swiss Federal Railway (SBB) employees - especially the engine drivers - are an appropriate cohort for those kind of studies. First, they are occupationally exposed to quasi-static EMF which are emitted from the electrical system of a locomotive and the overhead contact line (16.7 Hz AC). Second, the SBB keeps an account over each individual employment (starting date of employment, duration etc.), which allows the determination of EMF exposure for each employee. We focused on the physical

part of the study, tackling the various EMF emissions which are relevant for SBB employees. We performed measurements in a large variety of SBB rolling stock, covering both historic and actual engines. In addition we backed up the results of the measurements with simulations, enabling the calculation of historical EMF exposures back to trains from 1919 (start of the train electrification in Switzerland). The study comes to the conclusion that travelling with electrically operated trains is safe in the passenger coaches and even in the locomotive as far as the low frequent magnetic field is concerned as causative for certain diseases. The epidemiological part of the study shows that even the engine drivers which are significantly more exposed to the magnetic fields than passengers on the train have no special association to a higher mortality.

### Memo

**8.30-10.30:** ISEE/ISEA Awards. Klea Katsouyanni & Larry Needham. Gaston Berger Auditorium

**2.00-3.30:** MAA3-O: Occupational Health Oral Session. Room 2

**3.30-5.30:** MAB3-PD: Occupational Health Poster Discussion. Room 2

**5.30-6.15:** ISEE Mexico 2007 preparation. Room 2 - Followed by a cocktail

**5.30-7.00:** ISEE Members' General Meeting. Room Louis Armand East

## What's on today

By Gérard Lasfargues, Afsset, France

### Bridging occupational health and environmental health

The collaboration between occupational and environmental health specialists with the support of scientific societies such as ISEE, ISEA and ICOH is still greatly needed to improve knowledge on exposure and health effects. Exposure of working adults to reprotoxicants prior to conception and the associated risks for their offspring illustrates the interaction between environmental and occupational health. The governance of occupational health and priority setting will certainly be a matter of debate given the diversity of countries and industry sectors addressed in the occupational health sessions. Besides, papers presented in other sessions are often linked to occupational issues (biomonitoring, risk assessment methods, REACH implementation). Many other contributions highlight how closely related the approaches and tools used to assess exposures in occupational and environmental settings are. This is particularly true when it comes to biomonitoring.

## Today's question

What part of the conference did you find most interesting so far



**Otto Hanninen, Finland, ISEA member.**

*To me, this conference is always a great opportunity to meet other environmental epidemiologists. I also particularly appreciated yesterday's plenary on early age exposures.*

**Sandra Johannesson, Pernilla Gustafson, Sweden, ISEA members.**

*We work on personal exposure to air pollutants, so we attend most sessions on this area. There was a particularly interesting talk on domestic wood pollution. And as a lot of people in Sweden still use wood for heating, we were very keen on these studies presented.*

**Beata Peplonska, Poland.**

*Yesterday morning I attended the pre conference workshop called ECNIS. It focused on biomarkers and it was extremely interesting. Half of the participants were students and we could all ask the questions we wanted to.*

**Scott Bartill, USA, ISEE member.**

*I really enjoyed last morning's session on subpopulation. Because I think everybody cares about the young population and their contact with chemicals. It also gives this area a great recognition and might then lead to better studies.*

## Partners of the conference

	MINISTÈRE DE LA SANTÉ ET DE LA SOLIDARITÉ									
	MINISTÈRE DE L'AGRICULTURE ET DE LA PÊCHE									
	MINISTÈRE DE L'ÉCOLOGIE ET DU DÉVELOPPEMENT DURABLE							Media partners		