

Sept. 4 – 5, 2001: US-European Workshop: “Gene-Environment Research at the Interface of Toxicology and Epidemiology”

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Monday, Sept. 3, 2001, 19:00 Conference Dinner (Bavarian Evening)

Tuesday, Sept. 4, 2001, 8:30 – 17:30

Room: Olympiasaal

8:30	Welcome – Introduction	Ernst-Günter Afting, director GSF, Chris Schönwälder NIEHS, Herrmann Bolt, GENSUT, U. Gundert-Remy, director BGVV
9:00 - 11:00	Overview on gene-environment research in the US and Europe	Chairs: H.-Erich Wichmann, Jack Taylor
9:00	Epidemiological aspects of current European activities, including the EPIC study	Paolo Vineis, Torino, Elio Riboli, IARC
9:30	The interrelation between human and experimental toxicology and molecular epidemiology – from a toxicologist point of view	Hermann Bolt, Dortmund
10:00	Coffee break	
10:30	Gene-Environment Interaction and the ‘Environmental Genome Project’	Jack Taylor, NIEHS
11:00 - 12:00	Ethical issues	chair: Kirsti Husgafvel-Pursiainen
11:00	Ethical and legal frameworks in genetic epidemiology	Marja Sorsa, Helsinki
11:30	Ethical issues associated with the identification of susceptibility	Paolo Vineis, Torino
12:00	Lunch	
13:00 - 15:30	Genetic modulation of exposure	Chairs: Hermann Bolt, Douglas Bell
13:00	Molecular and genetic approaches to understand the function of susceptibility genes	Roland Wolf, Colin J. Henderson, Diane ME. Otto, Christoph Sachse, Gillian Smith, Dundee
13:30	Role of sulfotransferase polymorphisms	Hans-Ruedi Glatt, Potsdam
14:00	DNA repair polymorphisms: discovery, functional effects, risk	Douglas Bell, NIEHS
14:30	Genetic polymorphisms in metabolising enzymes and impaired DNA-repair capacity as susceptibility factors for human lung cancer	Angela Risch, Peter Schmezer, Helmut Bartsch, DKFZ
15:00	Genetic modulation of occupational exposures, effect of GSTs	Ricarda Thier, Dortmund
15:30	Coffee break	
16:00 - 17:00	General aspects in epidemiology	Chairs: Max Baur, Jay Lubin
16:00	Exposure and gene polymorphisms in epidemiological studies	Fredrik Nyberg, Sweden
16:30	High throughput genotyping in epidemiological studies	Thomas Meitinger, GSF

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Wednesday, Sept. 5, 2001, 8:30 – 17:30 Room: Olympiasaal

8:30 - 10:00	Genetic epidemiology and cancer	Chairs: Stephanie London, Eino Hietanen
8:30	Lung cancer studies – overview	Stephanie London, NIEHS
9:00	Environmental tobacco smoke and susceptibility to lung cancer	Brunhilde Blömeke, Hans F. Merk, Aachen, Curtis C. Harris, NCI
9:15	Effects of combined polymorphic variants of CYP1B1 and GST Genes on the risk of head and neck squamous cell cancer	Yon Ko et al., Bonn
9:30	Breast cancer and polymorphic GSTs	Eino Hietanen, Finland
10:00	Coffee break	
10:30 - 12:00	Genetic epidemiology and other complex diseases	Chairs: Fredrik Nyberg, Ingolf Cascorbi
10:30	Molecular epidemiology of cardiovascular diseases	Ingolf Cascorbi, Greifswald, Ivar Roots, Karl Stangl, Berlin
11:00	Genetic aspects of type 2 diabetes	Tom Lindner, Würzburg
11:30	The EGEA study. Results from the French Epidemiological study on the Genetics and Environment of Asthma	Francine Kauffmann, Paris
12:00	Lunch	
13:00 - 14:00	Statistical developments on gene-environment interaction and study design	Chairs: Heike Bickeböller, David Umbach
13:00	Family-based investigation of candidate genes	Heike Bickeböller, GSF
13:30	Study designs that use parents and an offspring to investigate the joint effects of exposures and candidate genes on disease risk	David Umbach, NIEHS
14:00	Closing remarks	

Scientific Report on the Workshop "Gene-Environment Research at the Interface of Toxicology and Epidemiology",

Garmisch Partenkirchen September 4-5, 2001

The workshop took place within the Conference Week on Environmental and Genetic Influences on Human Health. It was scheduled for one and a half days and attracted several participants from GENSUT as well as epidemiologists and toxicologists from many countries participating in the Conference week.. Participation was free, including a Bavarian evening on the day before the workshop. The workshop was co-sponsored by NIEHS (USA), GSF and ESF. It was opened by representatives of these organisations.

Aim of the workshop

NIEHS, ESF and GSF are interested in the field of environmental influences on human health. With the advances in genetic technology it becomes increasingly important to consider genetically defined subgroups which are at higher risk for environmental hazards. Therefore, interaction of the genetic background with environmental exposure has to be understood.

NIEHS has established a broad spectrum of activities with respect to toxicologic and epidemiologic research trying to identify and characterize relevant metabolic genes as in the environmental genome project (EGP). Furthermore, methods for designing experiments and epidemiological studies to address these questions are under development.

Similar activities have been started in Europe and Germany. One important goal is to strengthen the European research network on genetic susceptibility and toxicology GENSUT. Furthermore, case-control studies and cohort studies for different diseases are being prepared or on the way, which address gene-environment interaction. Methodological research in this field is ongoing as well.

A good opportunity for accelerating developments is this workshop with selected groups in the US, Germany and other European countries which have already identified areas of common interest. NIEHS, both the intramural and the extramural sections, have expressed interest. On the European side GSF offers to be a coordinator to include researchers from the relevant groups working in this field in Europe.

Programme

The Programme is found at http://www.gsf.de/epi/gap2001/NIEHS/pdf/NIEHS_Program.pdf

In total, the workshop was a great success and stimulated the international exchange of ideas and experiences in the field of gene environment interaction.

Participants

In total, an estimated number of about 100 persons attended. These were researchers from epidemiology and toxicology from European countries and other areas of the world, mainly the United States. Since participation was free, there is no specific list of participants available.