

Background

The human lungs may become exposed to a variety of toxic influences. Frequently, these influences consist in exposure to toxic gases formed as a result of fires. Other toxic agents affecting the lungs include various types of aerosols or particulate matter differing as to their composition and size distribution.

Quite often, fluids may enter the lungs directly via the bronchial tract as a result of primary aspiration. Particularly severe health disorders will as a rule result where gaseous components, aerosols, particulate matter as well as liquid compounds penetrate the lungs and reach deep lung areas.

Having reached the alveolar spaces, these types of toxicants may directly affect gas exchange. Resulting manifestations and clinical pictures will include pulmonary oedema, pneumonia and in severe cases, also lung failure.

Although important scientific and therapeutic experience has accumulated, there is still a lack of systematic scientific studies based on high-performance lung models which could produce valid statements on the pathophysiology of the deep lung areas.

The purpose of the event initiated by the BfR Committee for the Assessment of Poisonings is to describe the current state of scientific work and the different approaches used, and contribute to transparency regarding the different models.

The meeting is aimed at providing participants with an insight into the current state of research into the human lungs as compared to existing animal models, and explain the advantages and weaknesses of the different models in a discussion subsequent to the presentations.

Programme: 6 March 2013

Joint Symposium BfR and GT: Lung as the target organ – models for toxicity testing

Chair: Axel Hahn, Berlin;
Horst Thiermann, Munich

The event will be conducted in English

Background

10:45–11:00

Human Pulmonary Toxicology

Prof. Dr. Thomas Zilker (Toxicological Department, Second Medical Clinic, Technical University Munich, Munich)

11:00–11:15

Animal models in Pulmonary Toxicity Assessment

Prof. Dr. Dr. Jürgen Pauluhn (BAYER AG, Institute for Toxicology, Wuppertal)

Models

11:15–11:30

The Isolated Perfused Lung (IPL) in the screening of aerosol products

Dr. Monika Fischer, Prof. Dr. Wolfgang Koch, Prof. Dr. Clemens Dasenbrock (all Fraunhofer Institute for Toxicology and Experimental Medicine (ITEM), Hannover)

11:30–11:45

Acid-induced lung damage: Inflammation or injury?

Prof. Dr. Stephan Uhlig (Institute of Pharmacology and Toxicology, RWTH Aachen University, Aachen)

11:45–12:00

BMBF Prevalidation Study on direct in-vitro exposure of human lung cells to gases

Dr. Manfred Liebsch, PD Dr. Ralph Pirow (both Federal Institute for Risk Assessment (BfR), Berlin)

12:00–12:15

Complex in-vitro models of the respiratory tract

Dr. Dirk Steinritz, PD Dr. Annette Schmidt, PD Dr. Kai Kehe, Prof. Dr. Horst Thiermann (all German Federal Armed Forces Institute of Pharmacology and Toxicology, Munich)
PD Dr. Christina Pohl, Prof. Dr. James Kirkpatrick (both Institute of Pathology, Johannes Gutenberg University, Mainz)

12:15–12:30

Air-liquid interface exposure of human lung cells in the CULTEX®RFS system

Prof. Dr. Michaela Aufderheide (Cultex Laboratories GmbH, Hannover)

12:30–12:45

Simulation of oxygen transport through alveolar membranes

Dr. Axel Hahn (Federal Institute for Risk Assessment (BfR), Berlin), Prof. Dr. Khosrow Mottaghy (Institute of Physiology, RWTH Aachen University, Aachen)

12:45–14:00 Lunch break

Federal Institute for Risk Assessment

Identify Risks – Protect Health.

This is the guiding principle for the work of the Federal Institute for Risk Assessment (BfR) in the field of consumer health protection. The Institute was set up in November 2002 to strengthen consumer health protection.

It is the scientific agency of the Federal Republic of Germany being responsible for preparing expert reports and opinions on the safety of food and feeds as well as that of substances and products. In this context, the Institute plays an important role in improving consumer protection and food safety.

The BfR is responsible to the Federal Ministry of Food, Agriculture and Consumer Protection (BMELV). Its terms of reference include the assessment of existing and the identification of new health risks, the development of recommendations on risk reduction and the communication of this process.

German Society for Experimental and Clinical Pharmacology and Toxicology (DGPT, registered association)

The German Society for Experimental and Clinical Pharmacology and Toxicology, registered association (DGPT) was founded in 1920 and is a non-profit association based in Mainz. Its roughly 2,500 members are spread across the three societies "German Society for Pharmacology", "German Society for Clinical Pharmacology and Therapy" and "German Society for Toxicology". The Society for Toxicology (GT) is the driving force in promoting the advancement of the toxicological sciences, training toxicologists and applying new insights in practice. In order to be able to carry out these extensive tasks conscientiously there are, within the GT, different committees in addition to the board of directors, so-called boards and working groups. In the

boards, for example, opinions on toxicological questions are elaborated which are of interest to the public. The working groups concern themselves with a wide range of different subjects such as teaching at tertiary institutions and regulatory toxicology.

Place of event

Martin Luther University Halle Wittenberg
Hörsaalgebäude der Universität, Audimax
Universitätsplatz 1
06108 Halle/Saale

For directions, please go to:
www.dgpt-2013.de/?node=59

Registration

Online registration for the 79th annual meeting of DGPT registered association is now open. Please register at: www.dgpt-2013.de/?node=11

Participation fees	Late registration from 16 December 2012
DGPT members	120,00 €
Non-members DGPT	170,00 €
Students (up to 30 years of age)	80,00 €
Social evening	40,00 €
Social evening – student concession	15,00 €

* For registration at the student rate, valid student ID must be presented. Please send a copy of the document via fax to **+49 351 32017333** or as an attachment to an e-mail to Sylvia Neumann.

The symposium fee includes: access to all scientific events, the programme, abstract booklet, access to the poster and industry exhibition, a snack during the lunch break and / or poster sessions, coffee / tea during coffee breaks.

The participation fee applies per person and is, in accordance with §4 Paragraph 22 of the German VAT legislation exempt from sales tax. For the social evening, sales tax is, in accordance with §25 of German Sales Tax Law, not shown.

Symposium: Lung as the target – organ-models for toxicity testing



6 March 2013, Halle

FEDERAL INSTITUTE FOR RISK ASSESSMENT



Bundesinstitut für Risikobewertung