



China-Sweden Workshop on Modeling of Dermal Absorption of Hazardous Chemicals



20th-22nd September 2012
Beijing, The People's Republic of China

- Organizing Committee:** Professor Lujia Han (Chair), China Agricultural University, China
Professor Gunnar Johanson (Co-chair), Karolinska Institutet, Sweden
Dr Longjian Chen (Secretary), China Agricultural University
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- Conference venue:** The second meeting room on the 3rd floor of Jinma Hotel
- Sponsor:** The Swedish Council for Working Life and Social Research

Conference Scientific Programme

20th September 2012

12:00 – 14:00 Lunch (The 23rd floor restaurant in Jinma Hotel) and registration

14:00 – 14:10 Opening address, Professor Lujia Han

Session I Chair: Professor Gunnar Johnson

14:10 – 14:45 Professor Gerald Kasting, University of Cincinnati, USA
Kinetics of finite dose absorption through skin

14:45 – 15:20 Academician and Professor Shu Tao, Peking University
Bioaccessibility and Bound Residue Mobilization of Soil Containing PAHs and OCPs in Gastrointestinal Tract

15:20 – 15:55 Dr. Elisabet Artursson, Swedish Defence Research Agency
In vitro penetration of chemicals through human skin using online GC-detection

15:55 – 16:10 Tea and Coffee

Session II Chair: Professor Gary Moss

16:10 – 16:45 Assoc professor Anders Boman, Karolinska Institutet, Sweden
Dermal exposure/Dermatotoxicology

16:45 – 17:20 Assoc professor Longjian Chen, CAU, China
Modeling transdermal permeation and absorption based on brick-and-mortar model

17:20 – 18:00 Dr. Guoping Lian, Unilever, UK and Assoc professor Longjian Chen, CAU, China
Demo of transdermal modeling code

18:30 Dinner (Beijing Roast Duck Restaurant, Assemble in the lobby of Jinma Hotel)

21st September 2012

Session III Chair: Dr. Guoping Lian

- 9:00 – 9:35** Professor Gunnar Johanson, Karolinska Institutet, Sweden
Development of a combined model for evaporation, skin absorption and toxicity as basis for skin decontamination measures
- 9:35 – 10:10** Professor Jesper Bo Nielsen, University of Southern Denmark
Chemical and biological determinants for percutaneous penetration - impacts for modeling
- 10:10 – 10:45** Professor Jiali Bao, School of Public Health, Zhejiang University
Transdermal drug delivery by electromagnetic technology

10:45 – 11:00 Tea and Coffee

Session IV Chair: Professor Anders Boman

- 11:00 – 11:35** Dr. Tao Liu, Karolinska Institutet, Sweden
Evaluation of evaporation rates on dermal exposure to chemicals using semi-empirical, LSER and PLS models
- 11:35 – 12:00** Miss Yanyan Zhao, China Agricultural University, China
Experimental and theoretical studies on the binding of actives to purified keratin

12:00 – 14:00 Lunch (The 23rd floor restaurant in Jinma Hotel)

Session V: Chair Professor Gerald Kasting

- 14:00 – 14:35** Dr. Guoping Lian, Unilever, UK
Mathematical and biophysical principles of transdermal permeation and absorption – A multiscale approach
- 14:35 – 15:10** Dr. Matias Rauma, Karolinska Institutet, Sweden
Fraction based model for predicting dermal penetration of organic solvents

15:10– 15:30 Tea and Coffee

Session VI Chair: Prof. Lujia Han

- 15:30 – 15:55** Dr. Liming Wang, China Agricultural University, China
Determination of partition and binding properties of solutes to stratum corneum
- 15:55 – 16:30** Professor Gary Moss, Keele University, UK
Input / Output: The influence of data quality on models of percutaneous absorption
- 16:30** Professor Gunnar Johanson, Karolinska Institutet, Sweden
Closing remarks

18:00 Dinner (The 2nd floor restaurant in Jinma Hotel)

22nd September 2012

8:30 – 10:30 Round table discussions

- Modelling
 - o How can the models be improved?
 - o Is it possible to combine predictive models?
 - o Empirical modelling vs mechanistic modelling?
 - o Compartmental vs microscopic and multiscale modelling?
 - o Model validation – what are the criteria?
- Dermal penetration/absorption data
 - o What chemicals do we need to test and how do we do that?
 - o In-vivo vs In-vitro?
 - o Cross-validation of inter-lab data?
 - o New and emerging techniques?
 - o Measurement at sub-cellular level?
- Potential future collaborations
 - o Opportunities for student exchange program
 - o Guest exchange research program
 - o Bi-lateral governmental funding
 - o Industrial collaboration

11:30 – 13:30 Lunch (The 2nd floor restaurant in Jinma Hotel)

Please drive me to:

Jinma Hotel, No. 38A, Xueqing Road, Haidian district, Beijing 100083, P.R. China

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