

ERGECD 2012

October 10–12 in Trier
Germany

24th meeting of the European Research Group on Experimental Contact Dermatitis

Conference venue

Universität Trier, Building N, Room N2, Universitätsring 15, 54296 Trier

Program

Wednesday, 10.10.2012

13.00-13.15 Welcome to Trier and introduction to sessions (B. Blömeke and C. Goebel)

I. Dermal absorption and exposure assessment

Chair: D. Basketter

- 13.15-14.00 **Patzelt A.** - Berlin, Germany: Skin penetration pathways and their opportunities.
14.00-14.05 Questions
14.05-14.50 **Roper C.** - Edinburgh, UK: *In vitro* skin absorption method to study the epidermal/dermal disposition of a small molecular weight chemical in human skin.
14.50-14.55 Questions
14.55-15.10 **Rothe H.** - Darmstadt, Germany: The Measured Exposure Level (MEL) concept to measure consumer exposure under typical use conditions.
15.10-15.25 **Jaworska J.** - Brussels, Belgium: State-of-the-art in predicting dermal bioavailability and its role in triggering skin sensitization.
15.25-15.35 **Schepky A.***, Aleksic M., Barroso J., Cubberley R., Duplan H., Eilstein J., Gerstel D., Grégoire S., Hewitt N., Jacques C., Reisinger K., Rothe H. - Hamburg, Germany: New bioavailability/metabolism subgroup of Cosmetics Europe: goals and scientific program.
15.35-15.45 Discussion about quantitative extrapolation of *in vitro* findings to *in vivo* situation: How can dermal absorption help us?
15.45-16.00 **Coffee Break**

II. Protein reactivity

Chair: A.-T. Karlberg

- 16.00-16.15 **Gerberick G. F.***, Troutman J., Kern P., Goebel C. - Cincinnati, USA: Refinement of PPRA method and prediction model for evaluating skin sensitizing chemicals.
16.15-16.30 Kao D., **Gimenez-Arnau E.***, Lepoittevin J.-P. - Strasbourg, France: Covalent modification of lysine by allergenic hydroperoxides involving radical intermediates in iron systems.

- 16.30-16.45 **Guldemann J.***, Migdal C., El Ali Z., Gimenez-Arnau E., Kerdine-Römer S., Pallardy M., Lepoittevin J.-P. - Strasbourg, France: Evaluation of the sensitizing potential of chemicals based on their chemical reactivity: relationship with Nrf2 activation in dendritic cells.
- 16.45-17.00 **Natsch A.***, Gfeller H., Haupt T., Brunner G. - Duebendorf, Switzerland: Chemical reactivity and skin sensitization potential for benzaldehydes: Can Schiff base formation explain everything?
- 17.00-17.15 **Delaine T. ***, Hagvall L., Rudbäck J., Luthman K., Karlberg A.-T. - Gothenburg, Sweden: SAR studies of geranial: skin sensitization and peptide reactivity.
- 17.15-17.30 **Ponting D.***, Goodman J. M. - Cambridge, UK: Linking molecular structure and skin sensitization.
- 17.30-17.45 **Basketter D. A.***, Kimber I. - Sharnbrook, UK: ACD: is reactive chemistry the whole story?
- 17.45-19.30 **Get together**

Thursday, 11.10.2012

III. Innate immune response

Chair: M. Pallardy

- 8:30-8.45 **Martin S. F.*** - Freiburg i. Br., Germany: Overview: Innate immune responses to contact allergens.
- 8.45-9.00 **Weber F. C.***, Németh T., Ozsvári B., Oswald E., Futosi K., Jakob T., Puskás L., Mócsai A., Martin S. F. - Freiburg i. Br., Germany: Neutrophils are innate key players in contact hypersensitivity.
- 9.00-9.15 **Esser P. R.***, Wölfe U., Dürr C., von Löwenich F., Schempp C. M., Freudenberg M. A., Jakob T., Martin S. F. - Freiburg i. Br., Germany: Contact sensitizer triggered inflammation - a role for ROS production and hyaluronic acid degradation.
- 9.15-9.30 El Ali Z., Pallardy M., **Kerdine-Römer S.*** - Châtenay-Malabry, France: The role of the transcriptional factor Nrf2 in contact hypersensitivity; what's new?
- 9.30-9.45 **Rachmawati D.***, Bontkes H. J., Verstege M. I., Muris J., von Blomberg B.M.E., Scheper R. J., van Hoogstraten I. M.W. - Amsterdam, The Netherlands: Transition metal-sensing of TLR4: Next to nickel, cobalt and palladium are potent dendritic cell stimulators.
- 9.45-10.00 Dearman R. J., Hayes M. D., **Kimber I.*** - Manchester, UK: Interleukin 17 and skin sensitisation.
- 10.00-10.15 **Kimber I.***, Metryka A., Eaton L., Dearman R. J. - Manchester, UK: The role of tumour necrosis factor- α in Langerhans cell mobilization.
- 10.15-10.30 **Kosten I.***, de Gruijl T., Gibbs S. - Amsterdam, The Netherlands: Comparison of inflammatory mediators secreted by skin and gingiva equivalents.
- 10.30-11.00 **Coffee Break**

IV. Adaptive immune response

Chair: P.-J. Coenraads

- 11.00-11.15 Esser P. R., **Martin S. F.*** - Freiburg i. Br., Germany: T cell responses to contact sensitizers and *in vitro* assays to replace animal testing.
- 11.15-11.30 Goubier A., **Vocanson M.***, Macari C., Herbelin A., Nicolas J.-F., Bertrand Dubois B., Kaiserlian D. - Lyon, France: Invariant NKT cells suppress CD8⁺ T cell-mediated allergic contact dermatitis independently of regulatory CD4⁺ T cells.

11.30-11.45 **Mutez V.***, Achachi A., Cluzel-Tailhardat M., Le Varlet B., Fournier F., Rozieres A., Vocanson M., Nicolas J.-F. - Lyon, France: hTCPA: sensitive and specific detection of contact allergen-specific T cells revealed in a blinded study.

11.45-12.00 **Summerfield V.***, Davies M., Jain G., Mackay C., Maxwell G., Soumpasis I., Temblay J., Windebank S. - Sharnbrook, UK: Mathematical modeling of the sensitiser-specific T cell response.

12.00-14.00 Lunch

V. Activation of Antigen Presenting Cells

Chair: R. Scheper

14.00-14.15 Peiffer J.-L., Bouckenheimer J., Fabre I., Rousselle C., **Ourlin J.-C.*** - Saint-Denis, France: Evaluation of the sensitization potential of dimethylfumarate and analogs in the THP-1 model.

14.15-14.30 Migdal C., El Ali Z., Botton J., Guldemann J., Azoury M.-E., Giménez-Arnau E., Lepoittevin J.-P., Kerdine-Römer S., **Pallardy M.*** - Lyon, France: Activation of the Nrf2-ARE pathway as a biological read out of chemical sensitizer reactivity for amino acids.

14.30-14.45 Jakob A., Ohnesorge S., Dietz L., Kuppig S., **Thierse H.-J.*** - Mannheim, Germany: Quantitative proteomic analysis of nickel/allergen-regulated proteins reveals distinct apoptosis induction in human monocytes.

14.45-15.00 **Schepky A.*** - Hamburg, Germany: Human Peripheral Blood Monocyte Derived Dendritic Cell Assay for the *in vitro* detection of contact allergens.

15.00-15.15 **Ma P.-C.***, Cao Y.-P. - Nanjing, China: *In vitro* co-culture method to identify contact allergens in China.

15.15-15.30 **Hennen J.***, Scheitza S., Blömeke B. - Trier, Germany: News on the metabolic competence of our HaCaT/THP-1 coculture model.

15.30-16.00 Coffee Break

VI. Surrogate models

Chair: I. Kimber

16.00-16.15 Spiekstra S. W., Reijnders C., Scheper R., **Gibbs S.*** - Amsterdam, The Netherlands: Skin Equivalent made from TERT immortalized keratinocytes and fibroblasts for *in vitro* assays.

16.15-16.30 **Teunis M.***, Smits M., Ezendam J., Landsiedel R., Roggen E., Pieters R., Corsini E., Gibbs S. - Utrecht, The Netherlands: Prevalidation of a two-tiered approach to assess capacity and potency of skin-sensitizers.

16.30-16.45 **Gibbs S.***, Spiekstra S. W., Corsini E., Teunis M., Roggen E. - Amsterdam, The Netherlands: An update on the potential epidermal equivalent assay to identify sensitizers and determine sensitizer potency.

16.45-17.00 **Emter R.***, Van der Veen J., Natsch A. - Duebendorf, Switzerland: Gene expression changes induced by skin sensitizers in the KeratinoSens™ cell line: Discriminating Nrf2 dependent and independent events.

17.00-17.15 **Natsch A.***, Haupt T. - Duebendorf, Switzerland: Adding external metabolism in the form of rat liver S9 fraction to the KeratinoSens™ test.

17.15-17.30 **Mathes S.***, Natsch A., Striegl B., Girling P., Graf-Hausner U. - Wädenswil, Switzerland: The development of a reconstructed epidermal equivalent to evaluate skin sensitizers.

17.30-17.45 **Gutleb A. C.***, Klein S. G., Blömeke B. - Belvaux, Luxembourg: Multi-cellular approach for the prediction of adverse effects in lung tissue.

19.30 **Dinner (Viehmarktthermen)**

Friday, 12.10.2012

VII. Immune response to reactive chemicals

Chair: E. Giménez-Arnau

A. Hair dye molecules

- 8.30-8.45 **Pot L. M.***, Blömeke B., Coenraads P.-J., Caspers P. J. - Groningen, The Netherlands: Real-time detection of PPD penetration in the human skin by *in vivo* Raman Spectroscopy.
- 8.45-9.00 **Bonifas J.***, Scheitza S., Blömeke B. - Trier, Germany: Update on *N*-acetylation capacities towards arylamines in keratinocytes and THP-1.
- 9.00-9.15 **Goebel C.***, Diepgen T. L., Krasteva M., Schlatter H., Nicolas J.-F., Blömeke B., Coenraads P.-J., Schnuch A., Taylor J. S., Pungier J., Fautz R., Fuchs A., Schuh W., Gerberick G. F., Kimber I. - Darmstadt, Germany: Simplified skin sensitization QRA approach for hair dye ingredients.
- 9.15-9.30 Pot L. M., Coenraads P.-J., Goebel C., **Blömeke B.*** - Groningen, The Netherlands: Assessment of elicitation response under hair dye use conditions.

B. Fragrances and ingredients

- 9.30-9.45 **Niklasson I. B.***, Delaine T., Islam N., Karlsson R., Luthman K., Karlberg A.-T. - Gothenburg, Sweden: Cinnamyl alcohol oxidizes rapidly on air exposure.
- 9.45-10.00 **Rudbäck J.***, Islam N., Nilsson U., Karlberg A.-T. - Gothenburg, Sweden: Quantification of fragrance hydroperoxides with LC/MS/MS.

10.00-10.30 **Coffee Break**

VIII. Risk assessment with non-animal approaches

Chair: G. F. Gerberick

- 10.30-10.45 **Basketter D. A.***, White I. R., Burleson F. G., Burleson G., Kimber I. - Sharnbrook, UK: Dimethylfumarate: potency prediction and clinical experience.
- 10.45-11.00 **Mehling A.***, Bauch C., Kolle S. N., Ramirez T., Eltze T., Fabian E., Teubner W., van Ravenzwaay, Landsiedel R. - Düsseldorf, Germany: Putting the parts together: Combining *in vitro* methods to test for skin sensitizing potentials.
- 11.00-11.15 Aeby P., Alépée N., Ashikaga T., Barosso J., Dufour E., Gilmour N., **Goebel C.***, Kern P., Martinozzi-Teissier S., Maxwell G., Millet M., Reisinger K., Sakaguchi H., Schepky A., Tailhardat, M., Templier M. - Marly, Switzerland: The "COSMETICS EUROPE" research, development and method evaluation program for identifying and characterizing skin sensitizers without animal testing.
- 11.15-11.30 **Basketter D. A.*** - Sharnbrook, UK: The challenge of *in vitro* alternatives - good data.

11.30 **Lunch**

(in green: Presentations supported by Cosmetics Europe)