

International Meeting on Experimental Contact Dermatitis, Gothenburg, Sweden on 9–11 June, 2011

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The European Research Group on Experimental Contact Dermatitis (ERGEDC) started 30 years ago when the immunology of skin allergy was poorly understood. During the years the understanding has increased immensely and the present meeting in Gothenburg did further add to this knowledge.

Around 100 experts from Europe gathered in Gothenburg in June 2011 to share the latest news from research into the mechanistic aspects of contact dermatitis. The conference, organized by the Centre for Skin Research at the University of Gothenburg (SkinResGU), was the 23rd meeting of the European Research Group on Experimental Contact Dermatitis (ERGEDC).

ERGEDC has been at the centre of developments in non-clinical aspects of contact dermatitis for more than 30 years. In reality, ERGEDC arose as a response to the limited attention paid to scientific and toxicological aspects in clinical meetings on contact dermatitis. Every 18 months ERGEDC organizes open conferences in locations around Europe to explore the latest developments in the science of contact dermatitis, and especially skin allergy, in the understanding of the chemistry of substances that cause this type of allergy, and in debate as how to translate this knowledge into improved predictive methods. These meetings have often been the first place for

the presentation of new developments that have changed the discipline, e.g. the advent of the local lymph node assay (LLNA), the importance of oxidation in the generation of sensitizing chemicals, and the realization of the central role of dendritic cells in stimulating the T lymphocytes that are the ultimate effector cells in skin allergy.

This conference in Gothenburg brought together experts within cell biology, chemistry, immunology, pharmacology and toxicology, from both the academic sphere and from industry. The primary focus was on finding scientifically sound alternative methods to replace the animal tests for prediction of the sensitization potency of chemicals in contact with the skin. Thirty years ago, when the ERGEDC began, the immunology of skin allergy was only poorly understood, with even the most important cells, skin dendritic cells, being a mystery. Since then, however, the science has developed dramatically, so that many of the details of the cells involved



Fig. 1. The 23rd Meeting of the European Research Group on Experimental Contact Dermatitis (ERGEDC) was held in Gothenburg in June 9–11, 2011.



Fig. 2. Ann-Therese Karlberg, coordinator of the 23rd ERGEDC meeting together with parts of the local organizing committee at the venue for the conference. From left: Sofia Andersson, Ann-Therese Karlberg, Anna Börje and Carl Simonsson.

and how they are stimulated and interact to produce allergy have been elucidated. Our understanding of the chemistry of skin allergens has also evolved, such that we are now able to make calculations of the sensitization potential of a chemical, based on its structural relationship with other closely-related compounds. However, being able to explain the chemistry and mechanism of skin allergy does not mean that it is a simple matter to recapitulate all of these things in a predictive animal model, let alone *in vitro*. Nevertheless, chemically-based and cell-based methods are undergoing validation at the European Centre for the Validation of Alternative Methods (ECVAM), although further efforts are needed to find additional means of prediction. New findings presented in the June conference by the researchers of the SkinResGU using advanced bio-imaging techniques demonstrated new detailed knowledge on the mechanism of interactions between haptens and skin

proteins, and a potential new way to predict potential skin sensitizers.

The conference was held in an open and warm atmosphere, in tradition with previous ERGECD meetings. Researchers shared their latest findings in an informal way, with time for discussions, and without an abstract book. The ERGECD meetings are a suitable first place for presentations by PhD students. The next meeting will be arranged by Professor Brunhilde Blömeke at the University of Trier in Germany in autumn 2012, and is strongly recommended to all those with a keen interest in the non-clinical aspects of contact dermatitis. Those whose research includes aspects other than contact allergy are also welcome to attend. The topics of presentations are important for stimulating discussion and to provide the focus of the meetings.