

## Workshop

### Current scientific challenges of occupational skin diseases (OSD) in Europe

(Berlin, 19 – 20 September 2013)

## Summary

### Day 1 (19 September 2013)

During the introduction, the chair of the COST Action TD 1206 (StanDerm) briefly lined out the objectives of the Action and the activities to be undertaken to achieve the objectives: these are amongst others to undertake basic research to get more insight into e.g. barrier properties; to understand what kind of predictors can be found for individual susceptibility to deliver tailored prevention; to look into the epidemiology of occupational skin diseases and to disseminate the acquired knowledge within the research community as well as to important key actors. In view of the recent positive experiences made at national and EU level, he further emphasized that StanDerm should make use of the political leverage as it will help fulfill the aims. The four-year agenda of the Action is quite ambitious but if successful, then a great breakthrough will have been reached. The chair ends his presentation by mentioning a number of important forthcoming activities .

The morning session was devoted to the presentations of the working group chairs on the present state of affairs (background, problems, challenges) with regard to their subject matter, followed by proposals on questions/topics to be tackled. These proposals will be discussed within each working group meeting in the afternoon of Day 1.

**WG 1 (Aetiology and susceptibility):** Presentation made by Jacob Thyssen.

Possible questions to be addressed by the working group are:

- Identify genetic risk factors
  - Strong phenotypes
  - Big cohorts
  - Candidate gene, GWAS, exome, epigenetics, micro-RNA
  - Environmental risk factors
  - The burden of leisure exposures
  - Barrier vs Immune reactivity
  - Filaggrin, Tight Junctions, Transglutaminases, etc
  - IL-1, IL-8, TNF-alpha, etc
  - Detoxification systems
- Hardening phenomenon
  - Genetics
  - Exposures

**WG2 (Development of common European standards):** Presentation was made by Ana Gimenez Arnau . Based on the feedback received from the working group members prior to the workshop, she then elaborated on the issues that will be covered by the WG during the next four years, namely to:

- Collect information about the actually used procedures in the countries involved in this COST action
- Define the medical and administrative objective when an occupational dermatosis is diagnosed
- Define diagnostic, management and preventive standards
- Discuss the implementation of diagnostic, management and preventive procedures between countries
- Develop educational tools.

It was commented by the plenary that WG 2 and WG 5 should work closely together as their objectives are interlinked.

**WG 3 (European intervention studies):** Presentation was made by Richard Brans (vice-chair). In order to obtain more in-depth data, it is proposed to:

- Set up of randomised controlled intervention studies in various high risk professions to evaluate:
  - the effectiveness and feasibility of prevention strategies
  - transferability of already existing national approaches to other countries
  - links between prevention and outcomes as well as cost-effectiveness
  - if intervention can reduce the prevalence or severity of OSD even in highly susceptible individuals (link to WG1)
- Set up of field studies and experimental studies to develop standardised methods
  - to objectify the effectiveness of gloves, protective creams, emollients, skin cleansers and other personal protective equipment
  - to quantify hazardous substances deposited on the skin.

He added that prior to the workshop a survey was undertaken within the working group members to obtain information on their focus of interest. Hairdressers and health care workers were named as important high risk professions to evaluate. Richard Brans then asked if more persons are interested in joining the working group as it is an open group (as all other working groups!).

A discussion followed with regard to this particular issue as it was questioned how many more studies were needed to provide more evidence. The meta analysis clearly show that there is not yet sufficient data and that further well designed intervention studies, particularly at national level, are needed. Politicians need to be convinced by evidence-based studies, which unequivocally show the economic benefits of early intervention. Good practice examples have a great impact on social partners and politicians. Particularly the economic benefits should be highlighted with the planned intervention studies, namely if and how prevention pays. In this connection the return on prevention (RoP) study undertaken by the International Social Security Association (ISSA) together with the German social accident insurance (DGUV) was mentioned. To ensure follow-up and sustainability of the studies and research undertaken within the Action, StanDerm should exchange with key partners to bring forward the relevance of prevention and research of OSD. Health economic advice by the health economists in the COST action is essential.

**WG 4 (Surveillance, risk assessment and allergens):** Two presentations were made by Wolfgang Uter . The first one pertained to another COST Action, called Modernet, which is a network for the development of new techniques for discovering trends in occupational and work-related diseases and tracing new and emerging risks. When comparing the scope between Modernet and StanDerm, there are some similarities and strong

links with the objectives and activities to be undertaken by WG 1, 2 and 5. This Action will end in October 2013. StanDerm should consider linking up with this Action.

Presentation 2 was mainly devoted to the suggested *modus operandi* of the working group:

- ESSCA as a starting point
- Envisage co-operation with COST action 'Modernet'
- Brainstorm on categorization of job titles (maybe work together with Modernet, EUROSTAT, ILO),
- Brainstorm on multi-centre studies on new occupational allergens: what kind of information do we need with regard to occupational exposure?
- Brainstorm on how to collect studies from a technical point of view.

**WG 5 (Knowledge Dissemination):** In view of the high relevance and of disseminating knowledge on the very complex subject matter, Claas Ulrich and Carmen Salavastru presented the various aspects with regard to occupational skin cancer, namely concerning exposure, epidemiology, prevention mechanisms and treatment issues. Their interventions were followed by a presentation of Britta Wulfhorst who focused on the challenges of the objectives of WG 5. The biggest challenge will be the development of information and education material as it is closely linked with the different target groups of StanDerm. Which group can be reached with which means? And, how can we reach the end-users is an important question. A further task of the WG is to develop a COST homepage. This could include open access website platforms including e-learning and databases. However, the available budget does not allow for these additional tools. Fund-raising might need to be envisaged.

After the input of the five working groups, followed presentations from producers:

I ) John Hines from DEB Group (producer of skin cleansers and skin care products) elaborated on the role of producers in delivering solutions for hand hygiene and the fight against occupational dermatitis with developing appropriate products. A joined up approach through StanDerm could help moving forward with best practice examples concerning in particular skin care. DEB has access to workplaces, access to real product use data; can develop electronic monitoring technology, integrate best practice into compliance models and drive best-practice through to employers.

ii) Curt Hamann, MD, from SMARTPRACTICE: His focus of attention was to highlight the changes of glove production within the past decade. These changes are mainly driven by costs and have led to fundamental differences in their properties. The main take home messages were: There is not a single superior glove material or brand. We do not have durability in use data on current formulations and thicknesses. Permeability properties have greatly changed, we would need new studies with current, much lighter and much thinner products. Product testing is not relevant for the demand at workplaces. EU omits product testing of imported products. Accelerator allergy requires an accelerator free glove. Latex allergy requires a latex free glove; at least powder free latex for colleagues. Change gloves whenever there is a visible breach. Latex gloves today are not continuing the sensitization epidemic of the 90's. The majority of suspected glove "allergies" are NOT!

The **afternoon of Day 1** was devoted to the WG meetings where each WG had an opportunity to develop and discuss its work plan.

**Day 1 ended with a plenary session on the planned StanDerm Website :**

The presentation was the result of previous discussions led within the WG. The main task of StanDerm's website is to provide a platform to publish results of its activities. It should incorporate the COST logo (Do we need a corporate design?), information about working groups, information about events, pictures and so

forth. Some website examples, such as Modernet and LISS, including their navigation structure, were briefly demonstrated. Specific requirements need to be followed. The WG recommends not to include further options such as face book, chat and intranet newsletter.

## **DAY 2 (20 September 2013):**

Day 2 was mainly devoted to the presentation of the results of discussions led within each working group on the afternoon of Day 1.

**WG 1:** Three main objectives were determined, namely to identify biomarkers for easy sampling, to identify genetic risk factors and to look into the interactions by identifying susceptible individuals. As regards the proof of concept the idea is overall to have a strong categorization of phenotypes. This would include to look into the issue of long-short chain lipids, the measurement of pH, transepidermal water loss and dehydration and other traditional bioengineering parameters. Funding is obviously an issue to allow these activities (development of a tool box?). In addition to this, WG 1 envisages to undertake two small pilot studies as scarce data exist for both issues. One would be on lipids to find out what effects an emollient therapy would have on the epidermis. The other study concerns gloves and seeks to look into what occlusion does to the barrier and the complex barrier, and to identify inflammatory parameters (IL1, FLG breakdown products, lipids, and others). Lastly, WG 1 intends to carry out studies concerning experimental models of personal protective measures.

**WG 2** felt that it was very important for all its members to have a good understanding and knowledge on the prevailing definitions, diagnostic and classification systems and general principles (e.g. risk assessment, exposure, return-to-work, compensation rules) in the different EU countries. To that end, an inventory will be established which should entail information on existing guidelines, patient flow, prevention measures, legal provisions on the notification system, and so forth. Based on this inventory it will be possible to identify evidence based good practice examples. The target group should be the employers, employees and medical staff. The main outcome of the group is to produce a document (format still to be determined) for dissemination, this document will also contain the demand for future research. Also in this group the issue of funding was raised as COST does not provide for funding research activities.

**WG 3:** The main risk professions were identified: hairdressers/health care workers/food handlers/metal workers; outdoor workers (UV radiation) are considered to be a special group, which deserves particular attention. The focus of work will be on primary prevention: undertake an international multi-center prospective study; look into vocational schools (e.g. hairdressing, health care); have intervention and control/non-intervention groups and look into teach-the-teacher concepts. When looking into individual susceptibility, genetic markers should be considered. The experiences gained in WG 1 should be included into WG 3. Another important issue pertains to evaluating the effectiveness of workplace and after work emollients. Taking into consideration this ambitious work plan, the question was again raised with regard to funding of activities. One possible source will be through the application at HORIZON 2020 call, expected by the end of 2013, to undertake e.g. intervention studies. This still needs to be further discussed.

**WG 4:** The working group established a work plan and defined milestones. Activities include, inter alia, review of pathways, similar to the proposal of WG 2 (should therefore link up with WG 2). Vera Mahler will design a check list to that end. Another important aspect is the exposure assessment of the environment and skin as this is not done for every allergen. It is furthermore proposed to put together the different series used across Europe. It is not possible to diagnose just with baseline series. This will potentially be an on-going project. The group will start with hairdressers. An issue which requires more preparation and funding relates to carrying out studies on protective gloves (contents) and to collect data on standard forms. To that end, a concept proposal is to be prepared until next meeting in 2014. Further issues discussed in the group

were: biocides added to baseline series; standardisation of test haptens, with manufacturers and making special allergens available to the network partners. Next meeting: 11 March 2014 in Erlangen.

**WG5:** Discussions turned mainly around the Action's homepage and on how to structure knowledge dissemination. To that end, guidelines/standards will be developed for three audiences: experts, multipliers and public. With regard to knowledge dissemination for multipliers and end-users it needs to be explored whether the existing ENETOSH platform could be used. All working group chairs will be requested to fill in a template which they will receive in due course. The website administration will be done by the Secretariat in Berlin .

Some forthcoming challenges are: sustainability of the homepage and other tools (who pays for the server and administrator?); funding for the development of webpages for multipliers and public (end-user) and setting priorities. In any case by December 2013, a StanDerm homepage should be available. The next meeting of the working group is scheduled for March 2014.

During the ensuing discussions there was general consensus that it will be of utmost importance to regularly exchange amongst the different working groups. There is no need to reinvent the wheel if experiences made throughout the different countries are pulled together. Knowledge dissemination to raise awareness was recognized to be an essential tool. The experiences gained by the SAFEHAIR project ([www.safehair.eu](http://www.safehair.eu)) could be most relevant. OiRA (Online Interactive Risk Assessment; [www.oiraproject.eu](http://www.oiraproject.eu)) might be also a useful tool and - potentially - offer some funding for implementation by COST experts.

**The last contribution** pertained to the prevention of occupational skin cancer, presented by Karel Ettler . The participants felt that this is a very essential topic, which may deserve a special meeting on the subject matter. Dosimetry is an issue upon which little information is available apart from Germany, Switzerland, Denmark and Italy. In the latter case, studies were undertaken in different workplace situations such as farmers and fisherman. A couple of publications prevail, which will be circulated amongst the Action's members. As exposure is different within a country and from country to country, more information would be needed on how much time people are indeed exposed. Cultural habits could be detected. In any case, the topic needs to be further pursued and could be integrated into WG 3. In the EU Parliament a debate on the issue, including DG EMPL, EU-OSHA, WHO, social partners, will take place with the COST experts on the occasion of the Skin Cancer Awareness Day (5 November 2013, Brussels).

At the end, the chair thanked all participants for their enthusiasm and commitment in this Action. He recalled a series of meetings and looks forward to a fruitful work.

**NB:** Following the MC meeting, it has been decided to organize an additional workshop from 7-8 April 2014 in Bern (courtesy of Prof. Dagmar Simon as local organizer).

November 2013