

Short Term Scientific Mission (STSM) Report

STSM details

Title	Hand eczema amongst healthcare workers-an intervention study
Participant	Stefana Cretu, Colentina Clinical Hospital, Bucharest, Romania
Host	Sanja Kezic, Coronel Institute of Occupational Health Amsterdam, Netherlands
Period	14 – 19 February 2016

Background

Dr. Sanja Kezic and her research team have a rich experience in the use of the tape stripping method and TEWL study. They have also experience with using the confocal microscopy for the study of changes in the epidermis in patients with eczema. Together with my team, we are planning to use these techniques in our intervention study on apprentice nurses. I trust that the experience of Dr. Kezic and her team is of great value for me and the research carried out at my home institution.

Purpose of the STSM

The aims of this STSM were to:

- learn how to properly perform the tape stripping method in order to obtain quality samples for analysis
- improve my use of the in vivo confocal microscopy for the study of stratum corneum
- obtain further knowledge regarding the use of the in vivo confocal microscopy for the study of eczema
- enlarge my area of expertise in other research fields such as inflammatory skin conditions in workers with hand eczema

Work carried out during the STSM

Dr. Kezic provided us with several publications regarding the study of NMF and the protocol for the sample analysis. We met two members of her team, the PhD students Sjors Koppes and Maryam Soltanipoor. Both were very keen on sharing their experience in the field of research focusing on eczema in healthcare workers and atopic dermatitis. We learned to perform tape stripping, we were explained how

the samples will be processed and how the final results obtained. Dr. Kezic discussed with us the possibility of applying in vivo confocal microscopy for our study. We were shown the most important statistical analysis tools.

Main results obtained

After receiving hands-on training on the use of Vaporimeter and Tewameter Courage-Khazaka I now know how to measure the TEWL. I learned to measure moisture by means of the Moisturemeter, how to properly perform the tape stripping technique and how to measure optical density of the tape discs using a ScuameScan device. I learned how to place the samples in the special containers and how they are stored, shipped and processed in.

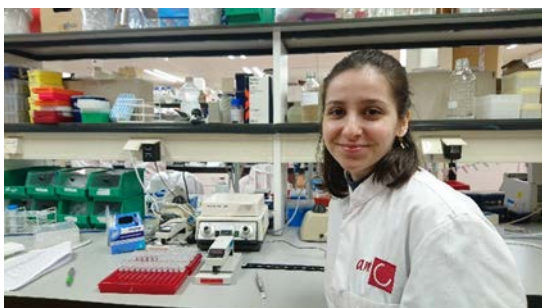


The Vaporimeter, Moisturemeter and tools used for tape stripping.



Analysis performed with the ScuameScan 850

By visiting the laboratory I experienced how the samples are processed and how the final results are obtained.



Analysing samples with SquameScan



Analysing TEWL with the Tewameter Courage-Khazaka

Dr. Kezic shared with us her experience regarding in vivo confocal microscopy for the study of hand eczema. She showed us images of her previous work and explained to us some of the drawbacks we might encounter when using this technique in our intervention study.

Future collaboration with the host institution

Our team will send the samples collected during our intervention study to Dr. Kezic in order for her team to perform the analysis for the NMF.

Foreseen publications/articles resulting from the STSM

Our team plans to publish the results of the intervention study, in which one of the outcomes measured is the NMF before and after the intervention.

Other comments

I would like to thank Dr. Sanja Kezic and her team for their kindness, for sharing their experience with us and for teaching us the tape stripping technique, the TEWL measurements and for offering us valuable knowledge regarding the use of the confocal microscopy for study of stratum corneum, the structure of the epidermis and eczema.

Dr. Stefana Cretu
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23 February 2016