

Short Term Scientific Mission (STSM) Report

STSM details

Title	CAD study
Participant	Sjors Koppes, Academic Medical Center (AMC) Amsterdam
Host	Dr. Suzana Ljubojevic Hadzavdic, Zagreb University Hospital, Croatia
Period	23 November – 6 December 2015

Aim of the STSM

1. To execute a clinical study on known contact allergy patients in the dermatological out-patient clinic together with Assistant Professor Suzana Ljubojevic Hadzavdic and her team. The study is approved by the local Medical ethical committee and is a collaboration between the dermatological research group in Zagreb and the Coronel Institute. A maximum of 40 patients will be included in the study and all undergo patch testing during that period. In order to be able to execute the study the effort of both, the Croatian and the Dutch team is necessary. The study aims at investigating several biomarkers which could be used to differentiate between allergic contact dermatitis and irritant contact dermatitis.
2. Gain experience in existing tape-stripping technique on a new patient population (allergic/irritative contact dermatitis). To our knowledge, this technique has not yet been used in this population before.

Work carried out during the STSM

During the STSM I, together with Assistant Professor Dr. Suzana Ljubojevic Hadzavdic and her team, performed patch tests on 30 patients who were positive on one or more contact allergens in the outpatient clinic in Zagreb university hospital. After patch-testing, the samples of the stratum corneum have been collected by applying the non-invasive tape stripping sampling technique.

Dr. Hadzavdic, co-author of the European handbook of dermatological treatments, is an expert on allergic contact dermatitis and has access to excellent research facilities for executing a clinical trial on multiple patients at the same time. During my stay, I learned and practiced under supervision of Dr. Hadzavdic how to perform clinical scoring and interpret patch test results which I will use in my future studies.

Dr. Ivone Jakasa, (Head of Laboratory for Analytical Chemistry , Department of Chemistry and Biochemistry Faculty of Food Technology and Biotechnology, University of Zagreb) a member of the local research team, has much experience with tape-strip technique and the analysis of tape-strip samples. Together with Dr. Jakasa, I learned the possibilities and limits of the tape strip technique in patients with contact dermatitis. The sampling of contact dermatitis affected skin has, to our knowledge, never been performed before. The experience in the field of skin biomarkers of Dr. Jakasa in combination with the experience in contact allergies of Dr. Hadzavdic offered a unique possibility to perform our jointly designed study.

During the performance, problems such as dropout of participants, negative patch test results and patients with severe reactions, arose. At meetings and discussions held with both Dr. Hadzavdic and/or Dr. Jakasa, we tried to solve the problem in such a way that it would not violate the study protocol. This gave me much experience in the practical execution of a clinical trial.

The clinical setting which Prof. Marinovic so kindly provided to the team of Dr. Hadzavdic was very well equipped for the execution of the clinical trial. This trial, a co-operation between the University Hospital Center Zagreb and the Coronel institute for Occupational health, could only be performed in a clinical setting, which is not available at my institution in Amsterdam. This, and the presence of a skillful and experienced research team at Prof. Marinovic's department (nurses, researchers) has given me an insight into the required conditions needed to be able to perform a clinical trial.

Main results obtained

In total, 30 patients were seen at 3 different days. We gathered more than 2000 skin samples, which are being analyzed at the Amsterdam Medical Center and the Centre for Nanotechnology in Münster for various inflammatory mediators, filaggrin breakdown products and corneocyte morphology. First results are expected already end of December. All samples will be analyzed by April 2016 and will be part of my PhD thesis.

Future collaboration with the host institution

After having finished the analysis of the samples, I will make the statistical analysis and prepare the draft scientific report. We will discuss the results with the researchers of the University of Zagreb and they will be involved in the production of the articles resulting from this study. We are very satisfied with the present clinical trial and will certainly be interested in participating in future trials with the University hospital of Zagreb.

Foreseen publications/articles resulting from the STSM

We are planning to submit 2 articles on the results of the study.

*Sjors Koppes, MD, MSc
Coronel Institute of Occupational Health
Academic Medical Center (AMC)
University of Amsterdam, Netherlands
December 15, 2015*