



EU-MASCARA

The Markers for Subclinical Cardiovascular Risk Assessment project
European Community's Seventh Framework Programme (FP7/2007-2013)
Grant Agreement no 278249.

we are **1** year in!

January 2013, Issue 1

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Reflecting on the first year and looking ahead to the next phase.

“ It is a great honour to coordinate the EU-MASCARA consortium. Looking back at the last year I am sure you will agree that we have made some great progress. There have been a number of exciting projects locally and across partners, and we have already produced quite a significant number of data and, importantly, publications.

What is important for the years ahead is that we consolidate our data, continue with our efforts and take the consortium to a next level. If there is anything that we could do better than it is the approach to our tasks as a whole consortium. EU-MASCARA benefits from its incredibly strong partners, but the consortium will be even stronger if we further improve our collaboration. The work in years 2 to 4 has been designed to build upon the techniques and collaborations that we have established in year 1, and we are in an excellent position to continue producing important data.”

- Christian Delles, The University of Glasgow

Welcome to the First edition of the EU-MASCARA e-zine.

In each issue of our bi-annual e-zine we will be bringing the spotlight on the organisations and researchers that are working on the project and how their contributions are fueling the success of the project. In this first Issue we take a closer look at the research company Mosaïques Diagnostics and the population cohort, Generation Scotland.

To receive each issue directly to your mailbox as they become available please complete the Contact Us form on our website with Your Details and the Message “SUSCRIBE” .

Alternatively, each Issue will be available to download from the project website:
www.eu-mascara.eu

Mosaiques Diagnostics

Results and potential impact of urinary biomarkers in assessment of cardiovascular disease

Within the European Union FP7 project EU MASCARA, mosaiques diagnostics (Hannover, Germany) provides its unique capillary electrophoresis mass spectrometry CE-MS platform, a valuable tool for the identification and assessment of biomarkers on the basis of clinical proteomics.

Proteomics is the systematic analysis of a large number of proteins or peptides in tissue and body fluids.

“Proteins play a central role in our bodies. A deeper insight into the functional relevance of these proteins under healthy or diseased conditions is the main challenge in clinical research”, says Harald Mischak, Chief Scientific Officer at mosaiques diagnostics.

Urine presents a rich source of information related to the (patho)physiology of many internal organs and structures. Pathological alterations always result in changes of specific proteins, which can be detected in associated fluids, e.g., in the blood. As blood is filtered in the kidney, these indicative changes subsequently also result in changes in the urine, either as intact proteins or in form of their fragments. In addition, urine provides several advantages: high pre-analytical stability and non-invasive sample collection.

Urinary proteome analysis based on CE-MS has enabled the identification of specific biomarkers that allow assessment of cardiovascular disease. In addition, in yet

small studies several of these biomarkers were demonstrated to be associated with disease development and revealed significant changes as a result of therapeutic intervention. Our knowledge on the disease-associated changes in the proteins and protein fragments is now the next logical step toward identification of relevant changes in biochemical pathways. Ultimately, these data will enable to develop a model of the molecular pathology of cardiovascular disease, and lead to the identification of the most appropriate therapeutic targets.

About mosaiques diagnostics

Mosaiques diagnostics GmbH is a privately owned company, established in 2002 in Hannover, Germany. The company's core competence is the early and reliable detection of diseases based on panels of (mostly urinary) protein biomarkers, subsequently aiming at enabling personalized medicine based on molecular phenotyping, followed by the most appropriate therapeutic intervention. In addition, Mosaiques' knowledge is employed in advanced drug development. To date, Mosaiques is a leading institution in clinical proteomics and biomarkers discovery.

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Project Meetings

Kick Off Meeting,
19-20th January 2012, Glasgow, UK

In the first month of the project the EU-MASCARA collaborators met as a consortium for the first time since the start of the project to discuss the project workplan, the meeting was hosted by our coordinator, the University of Glasgow.

The meeting includes an introduction to the project and its partners and plans were drawn up for the year 1 pilot studies.

The meeting was very successful and provided an excellent start to the project.

Second Consortium Meeting,
22-23rd October 2012, Vienna, Austria

Representatives from each one of the 15 consortium partners attended the 2nd EU-MASCARA consortium meeting hosted by Emergentec Biodevelopment GmbH in Vienna, 24th-25th October 2012.

Progress made since the kick-off meeting was discussed as partners presented results from the pilot studies carried out in the first year of the project. The remainder of the meeting focused on how to bring the pilot studies together in Phase 2 of the project.

Working towards effective data integration is an important aspect of EU-MASCARA and the progress towards proteomic and metabolomics data integration was also presented and discussed.



Generation Scotland (GS)

EU-MASCARA aims to make use of a wide range of patient and population cohorts from different European regions. One such cohort is the Generation Scotland: Scottish Family Health Study (GS:SFHS), a population and family-based cohort of ~24,000 participants recruited across Scotland (www.generationscotland.org). The GS resource is anticipated to be particularly well suited for validation of biomarker findings and assessment of risk prediction models in a set of people where risk factors may be present but advanced cardiovascular disease has not yet been diagnosed. EU-MASCARA Coordinator Prof Anna Dominiczak (University of Glasgow) is also a Generation Scotland Principal Investigator and member of the GS Executive.

All 24,000 GS:SFHS participants filled in a health and lifestyle questionnaire and provided blood or saliva for extraction of a DNA sample. Over 21,000 also underwent clinic assessments (e.g. blood pressure, ECG) and provided urine and serum samples. It was originally anticipated that all GS sample analysis would be conducted in the UK, so when GS:SFHS participants gave consent, they agreed that samples and data could be used for medical research in the UK and that researchers in other countries could access data only. It is now clear that there are some kinds of research that can only be done in specialist labs outside the UK, so to maximise the use of GS resources, additional consent is being sought by GS to allow this.



Pamela Linksted, GS Chief Operations Officer said, "Over 50 projects have already used GS:SFHS samples and data for research on a range of conditions. We now have a growing number of requests to send samples outside the UK. It is important that we make the most of participants' contributions, so we are asking for explicit consent to allow this."

GS does not hold the names and addresses of participants; contact details are retained by the National Health Service (NHS). Participants' samples and data are linked to these details by a code. GS has written to participants via the University of Dundee Health Informatics Centre using this code, seeking their consent to allow samples to be used in laboratories outside the UK. Over 21,000 letters have been sent and replies are arriving in their thousands.

This process will be helpful for EU-MASCARA planning, as it will allow analysis of GS:SFHS samples not just in the University of Glasgow and Randox Ltd laboratories in the UK, but also in the other consortium partners throughout Europe, such as Mosaiques Diagnostics GmbH (see previous page).

[access@generationscotland.org]

Communicating with the wider Scientific Community

The EU-MASCARA consortium strives to disseminate the projects results to the wider Scientific Community and create awareness of the project and its aims through a wide variety of different activities.

The first year of the project has seen great outputs in terms of a large number of related publications and attendance at conferences throughout Europe.

In April 2012 EU-MASCARA Investigators attended the 22nd European Meeting on Hypertension and Cardiovascular Protection in London, UK and took part in a dedicated session on European research initiatives and EU funding opportunities in the field of cardiovascular research.

EU-MASCARA aims to hold annual satellite symposiums at European conferences throughout the duration of the project. Further information will be posted on the projects website and the project's twitter account in due course.

A full list of EU-MASCARA dissemination activities including publications can be found on the project website:

www.eu-mascara/pubs.shtml



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