

Towards Personalised Medicine for Inflammatory Skin Diseases – Start of Research Project BIOMAP

The large-scale IMI project will investigate the causes and mechanisms of Atopic Dermatitis and Psoriasis

On 1 April, 2019, the European research project BIOMAP (Biomarkers in Atopic Dermatitis and Psoriasis) kicks off its activities with the aim of improving the lives of patients affected by the two most common inflammatory skin conditions. Addressing key unmet needs in treating atopic dermatitis and psoriasis by analysing data from more than 50 000 patients, the five-year project will have a broad impact on disease understanding, patient care and future therapies. The team comprises 26 academic and five industry partners as well as five patient organisations. The Innovative Medicines Initiative, the European Commission and the participating pharmaceutical companies provide EUR 20.8 million funding for the first IMI project in the field of dermatology.

Atopic dermatitis and psoriasis affect more than 300 million people worldwide and are highly variable in terms of onset, severity, progression over time and response to treatment. Resulting in significant morbidity and an increased risk for associated conditions such as arthritis and asthma, inflammatory skin diseases are a huge burden to patients and families, care-givers and healthcare systems. Yet, despite many years of research, there are still significant gaps in the understanding of both conditions.

The renowned clinicians and scientists of BIOMAP, who have now joined forces in a large public-private partnership, will examine the causes and mechanisms of these conditions. By analysing the largest collection of patient data ever and performing advanced molecular investigations at the single cell level and in the tissue context, they aim at identifying biomarkers for variations in disease outcome. Taking advantage of recent technical developments in translational medicine, the project will drive drug discovery and improve direct disease management by combining clinical, genetic and epidemiological expertise with modern molecular analysis techniques and newly-developed tools in bioinformatics. BIOMAP is the first IMI project in the field of dermatology.

Assuming that the variation in symptoms and disease progression reflects fundamental differences at a molecular level, the researchers will take a holistic, systematic approach to identify patient subgroups with different subtypes of disease and different responses to therapy. Additionally, the BIOMAP consortium aims to examine the genetic and environmental factors which exert additional influence on disease outcome and treatment response as well as measurable factors in the patients' blood and skin which reveal the disease subtype they belong to. In an unprecedented analysis of harmonised clinical and molecular data from more than 50 000 patients as well as healthy individuals, the BIOMAP researchers aim to derive a new model for disease classification in order to provide each patient with optimal treatment and an individualised therapy scheme.

Professor Stephan Weidinger, academic coordinator of the consortium and internationally-renowned clinician scientist from the University of Kiel Germany, hopes that “atopic dermatitis and psoriasis will be identified as a series of different diseases rather than just one disease, each with a characteristic molecular ‘signature’.”

Dr Paul Bryce, the consortium's project lead from Sanofi, states that “by understanding these diseases as comprehensively as possible, any molecularly defined endotypes we will find will help to drive the next generation of precision therapies that can improve the lives of patients.”



“The findings from BIOMAP will drive rapid drug discovery to target causal mechanisms, and will pinpoint biomarkers which can support clinicians to decide who, when and how to intervene”, expects BIOMAP’s academic co-coordinator Professor Catherine Smith from King’s College London.

“BIOMAP will help us to better understand the relationships between inherited susceptibility, environmental factors, and molecular profiles, as well as the roles of each of these in onset and progression of the diseases”, says Dr Witte Koopmann, industrial co-project lead from LEO Pharma.

The voices of patients living with Atopic Dermatitis and Psoriasis will be at the heart of BIOMAP, through the establishment of a Patient Advisory Group. It will ensure that patients’ insights, opinions and wishes are taken into account across all the multiple components of the project.

Helen McAteer, Chief Executive of the Psoriasis Association and member of the BIOMAP Patient Advisory Group, described the ambition and purpose of BIOMAP as “a major opportunity to improve the lives of people with skin disease – we need information on why and who is going to develop severe disease, and also new approaches to treatment. Involving a Patient Advisory Group puts the needs of the patients at the heart of the project from the very beginning. By providing a European-wide platform for collaboration, BIOMAP will enable sharing of know-how and data about atopic dermatitis and psoriasis so that we can all work together like never before”.

BIOMAP is funded by the Innovative Medicines Initiative 2 Joint Undertaking under Grant Agreement No. 821511 and in-kind contributions of the participating pharma companies. The Joint Undertaking receives support from the European Union’s Horizon 2020 research and innovation programme and EFPIA.

The project will officially kick off its activities with a first meeting in London on 10-12 April, 2019.



This project has received funding from the Innovative Medicines Initiative 2 Joint Undertaking (JU) under grant agreement No. 821511. The JU receives support from the European Union’s Horizon 2020 research and innovation programme and EFPIA.

Project Facts

Project acronym:	BIOMAP
Project title:	Biomarkers in Atopic Dermatitis and Psoriasis
Start date:	1 April 2019
Duration:	60 months
Budget:	€ 20.8 Mio
Coordination:	Christian-Albrechts-Universität zu Kiel, Prof. Stephan Weidinger
Project Lead:	Sanofi-Aventis Deutschland GmbH, Dr Paul Bryce
Project Management:	EURICE – European Research and Project Office GmbH, Dr Verena Peuser, Dr Bianca Dibari
Website:	www.biomap-imi.eu

Biomap Partners at a Glance

Germany	Christian-Albrechts-Universität zu Kiel Klinikum rechts der Isar der Technischen Universität München Universitätsklinikum Hamburg-Eppendorf Heinrich-Heine-Universität Düsseldorf Hahn-Schickard-Gesellschaft für angewandte Forschung e.V. Eurice – European Research and Project Office GmbH Sanofi-Aventis Deutschland GmbH Boehringer Ingelheim International GmbH Technische Universität München
United Kingdom	King's College London University of Bristol University of Dundee London School of Hygiene & Tropical Medicine Pfizer Limited
Sweden	Karolinska Institutet
Netherlands	Academisch Ziekenhuis Leiden Radboud University Medical Center Academisch Medisch Centrum Universiteit van Amsterdam
Luxemburg	Université du Luxembourg Information Technology for Translational Medicine
Finland	Tampereen Yliopisto/ Tampere University Itä-Suomen Yliopisto/ University of Eastern Finland
Estonia	Tartu Ülikool/ University of Tartu
Austria	Austrian Institute of Technology GmbH Universität Wien



Denmark	Københavns Universitet Den Selvejende Institution Dansk Børneastma Center LEO Pharma A/S
Switzerland	Centre Hospitalier Universitaire Vaudois
Ireland	Trinity College Dublin
Belgium	UCB Biopharma SPRL

About IMI

The Innovative Medicines Initiative (IMI) is Europe's largest public-private initiative aiming to improve health by speeding up the development of, and patient access to, innovative medicines, particularly in areas where there is an unmet medical or social need. IMI facilitates collaboration between the key players involved in healthcare research, including universities, the pharmaceutical and other industries, small and medium-sized enterprises (SMEs), patient organisations, and medicines regulators. It is a partnership between the European Union (represented by the European Commission) and the European pharmaceutical industry (represented by EFPIA, the European Federation of Pharmaceutical Industries and Associations). For further information: www.imi.europa.eu

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