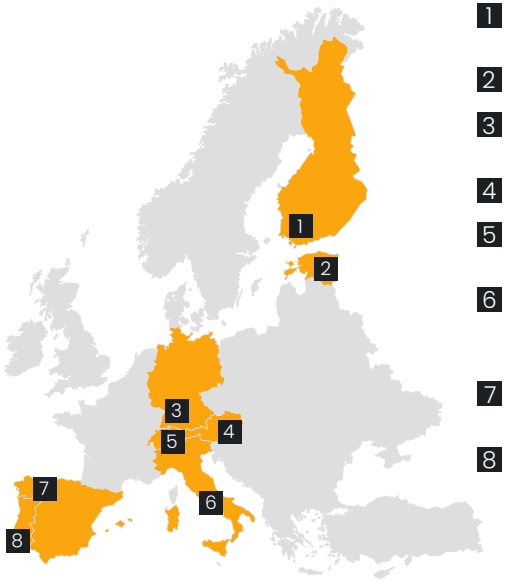
ABOUT ENDOTARGET

- 14 Partners
- 8 Countries
- 7 Million € EU
- 1.8 Million € SERI*



1 HUS
UH
2 UTARTU
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4 TU WIEN
5 SIB
ETH ZÜRICH
6 UNICAM
EBRIS
NEC Italia
7 SERGAS
FIDIS
8 iMM

Rheumatic diseases (RDs) and musculoskeletal diseases affect more than 40% of Europe's population[1] and cause significant disability, pain, reduced lifespan, and a very high economic burden[2]. But by now it is unclear, which mechanisms and triggers are responsible for the onset of rheumatic diseases.

The ENDOTARGET project adresses this problem and aims to explore the significance of the gut microbiome as a driver of chronic systemic inflammation and its role in the pathogenesis of rheumatic disease.

*Swiss State Secretariat for Education, Research and Innovation

[1] https://cordis.europa.eu/article/id/97231-ep-calls-to-recognise-the-extraordinary-burden-of-rheumatism-and-arthritis

[2] European Alliance Of Associations For Rheumatology (EULAR), position paper, November 2011 (H2020 Framework Programme).

ENDOTARGET PARTNERS

CONTACT INFORMATION

www.endotargetproject.eu

ENDOTARGET_EU

ENDOTARGET EU Project

ENDOTARGET is a Horizon Europe project supported by the European Commission under grant agreement No 101095084.

ENDOTARGET

Systemic Endotoxemia as the driver of chronic inflammation - Biomarkers and novel therapeutic targets for Arthritis

Funded by the European Union

ENDOTARGET IMPACT

INDUSTRY

We will contribute to the development of new effective drugs and adjuvants for RD treatment.

PATIENTS

We will develop digital and personalised diagnostic approaches for RDs, enabling an early diagnose and intervention of RD onset. Based on that, a tailored strategy can be selected to treat the cause of RDs (new drugs, diet changes, etc.). Thus, the patient must struggle less with therapeutic side effects.

PUBLIC AUTHORITIES

We will produce actionable recommendations to tackle RDs, which will reduce the risk of RD onset as well as the associated disease-adjusted life years. This will result in a decrease of healthcare costs for RDs and simultaneously the possibility to allocate saved healthcare costs efficiently.

RESEARCH AND ACADEMIA

We will provide a deeper understanding of the events triggering health to RD transition, bringing the research in the field of chronic inflammation forward.

CLINICIANS

We will develop an artificial intelligence based supporting tool for RD prediction (risk factor profiles) and therapy selection, enabling a personalised treatment for the patients.

CITIZENS

We will improve the awareness & self-management (e.g. guidelines, software tools) of citizens towards RDs. Thus, the project will reduce the lifestyle risk factors of chronic disease onset and will improve the citizens' quality of life.

CAUSE

Intestinal dysbiosis of gut microbiome

Increased permeability of intestine

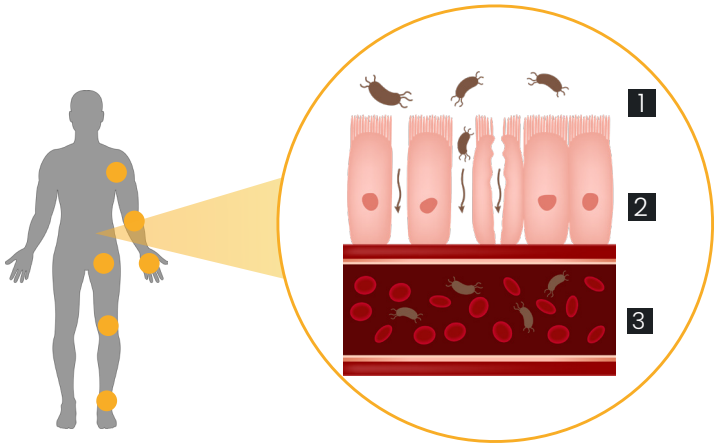
Bacterial compounds in blood

AIMS

Personalised Therapies and Diagnosis

- Drugs
- Digital Prediction Tools
- Nutritional Interventions

Identification of risk parameters



Translocation and circulation of bacterial compounds in blood

⬇

Systemic endotoxemia

+

Inflammation in joints

⬇

Chronic rheumatic diseases

1 Gut lumen

2 Intestinal cells

3 Blood vessel

METHODOLOGY

To decipher the mechanisms and events triggering health-to-disease transition, the project will study the pathogenesis of rheumatic disease by

(1) conducting geographically diverse cohort studies

(2) using high-throughput OMICS- based analysis for the identification of risk parameters (biomarker)

(3) conducting targeted clinical studies

(4) performing mechanistic studies

(5) conducting interventional Proof of Concept studies of diet, faecal transplantation and a gut permeability decreasing drug

(6) analysing new potential drugs or nutraceuticals *in vitro* to cope with endotoxemia effects in target tissues.

(7) developing a software tool for predicting the risk of rheumatic disease development and for patient satisfaction.