

Sys4MS

Title Using computational tools to design personalized healthcare for Multiple Sclerosis.

Coordinator Pablo Villoslada (August Pi i Sunyer Biomedical Research Institute, Spain).



Project partners



Julio Saez-Rodriguez (University Hospital Aachen)



Hanne Flinstad Harbo (University of Oslo)



Paul Friedemann (Charité University Medicine Berlin)



Maria Cristina Mingari (IRCCS San Martino / IST University Hospital)

Start date May 1st, 2016

End date April 30th, 2019

Funding requested 1.724.000 €

Duration 3 years

Abstract Tailoring or personalizing health care for people diagnosed with Multiple Sclerosis (MS) is critical to control their illness and maximize their quality of life. In the Sys4MS research project we aim to take advantage of the power of computers to integrate different types of clinical data, allowing us to define how the disease will progress and thus, to select the best therapeutic approach. To achieve this we will collect clinical information from the different tests carried out on MS patients who are followed at the MS centers in Barcelona, Genova, Berlin and Oslo. We will integrate all this complex information using computational tools and develop new software that

will match a given patient to a specific disease subgroup, allowing their clinician to better predict the course of their disease. Based on such predictions, patients and physicians will be able to take better informed decisions in order to care for each patient. From this project, we expect to validate a new technology for studying complex diseases, mainly immunology and neurological diseases, in order to identify new therapeutic targets. Moreover, we aim to develop a computational tool in order to predict combination therapy and personalized therapeutic decisions to the molecular profile of each patient, a next step in the development of Personalized Medicine for Multiple Sclerosis and other complex diseases.

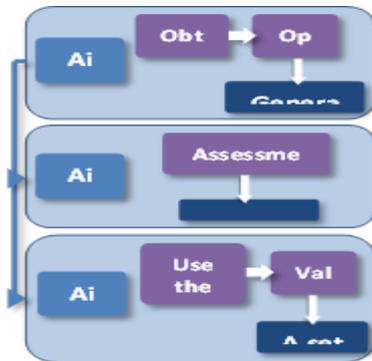


Figure 1. Objectives and tasks within the Sys4MS project that integrates the omics and clinical data of MS patients in personalised network models to predict disease course and treatment response.

Email PVILLOSLADA@clinic.ub.es