

## **CASYM AND THE ROAD TOWARDS A EUROPEAN SYSTEMS MEDICINE APPROACH**

From 2012 until 2017 the multidisciplinary consortium CASyM with representatives from academia, research institutes, clinical centres as well as funding bodies, Industry and SMEs joined forces to build a vision and a practical strategy (roadmap) for the implementation of Systems Medicine across Europe. During this time CASyM functioned as managing, coordination and support platform that brought together a critical mass of relevant stakeholders to develop a strong European Systems Medicine community and to work towards a long-term and sustained implementation of Systems Medicine across Europe – with the aim to bring Systems Medicine into everyday clinical research and practice for the benefit of public health in the near future.

The CASyM roadmap, initially published in 2014, and released as revised version in 2017 identified four core priority actions (community building, proof of concept/pilot study, cross-disciplinary training and data access, sharing and standardization) and ten key areas necessary to the successful implementation of Systems Medicine in Europe. These areas are outlined along with cross-cutting actions and specific recommendations over a period of 2, 5 and 10 years. Based on the recommendations of the CASyM roadmap, the European Commission (EC) launched the first Systems Medicine ERA-NET under Horizon 2020 – a consortium of 13 European funding bodies with support by the EC under the co-fund scheme, which agreed on a common agenda to further develop a European Systems Medicine approach. The ERA-NET “Systems Medicine to address clinical needs” started in January 2015 with the aim to specifically fund demonstrator projects – as recommended by the CASyM roadmap – that identify areas where a systems approach addresses a clinical question and provides solution strategies to clinical problems with clear emphasis on using Systems Medicine to make a real, lasting benefit for personalized care and the understanding of the cause of complex diseases.

In parallel, and to foster further support the formation of a Systems Medicine community through dissemination of specific information, CASyM launched the Systems Medicine Web Hub – the only central web based European platform related to Systems Medicine that also integrates a range of social media channels with the aim to support scientists, projects and initiatives in communicating their efforts. Since CASyM had no requirement to continue after the project’s life span, its achievements, however, needed to be sustained in order to ensure that the considerable investment of the EC makes a real, long lasting benefit on health, understanding of disease, funding policy and health economics. A CASyM key deliverable was thus to safeguard the legacy of bringing Systems Medicine to all relevant key players and to push for real life examples that make a difference. To achieve these goals in a sustainable fashion and beyond the life time of the project, CASyM, in 2016, founded the European Association of Systems Medicine (EASyM) that will fulfil the long-term strategy and vision for Systems Medicine in Europe in the future.

By building on current national and international efforts using Systems Medicine as toolbox to deliver personalised care, and the coalescing of the many stakeholder groups, the goals already achieved in CASyM & EASyM laid the future foundation that –eventually– will bring more significant and sustained benefits to the European citizen, both in sickness and in health.