

ERACoSysMed Joint Transnational Call for Proposals 2017

“2nd Joint Transnational Call for European Research Projects on Systems Medicine”

ERACoSysMed is a network of 15 funding organisations from 13 countries. The central aim of ERACoSysMed is to enhance the implementation of Systems Biology approaches in medical concepts, research and practice throughout Europe and Israel by structuring, coordinating and integrating national efforts and investments. ERACoSysMed is a five year programme funded under the European Commission ERA-NET Cofund scheme in the H2020 Horizon programme which has begun in January 2015.

The following parties:

- The Austrian Science Fund (FWF), Austria
- The Fund for Scientific Research (FNRS), Belgium
- The Research Foundation – Flanders (FWO), Belgium
- The French National Research Agency (ANR), France
- The Federal Ministry of Education and Research (BMBF), Germany
- The Chief Scientist Office of Israeli Ministry of Health (CSO-MOH), Israel
- The Italian Ministry of Health (MoH-IT), Italy
- The National Research Fund (FNR), Luxembourg
- The Netherlands Organisation for Health Research and Development (ZonMw), The Netherlands
- The Research Council of Norway (RCN), Norway
- The Slovak Academy of Sciences (SAS), Slovakia
- The Ministry of Education, Science and Sport (MIZS), Slovenia
- The National Institute of Health Carlos III (ISCIII), Spain

intend to open the second joint transnational call (JTC-2) for funding multilateral research projects on Systems Medicine.

Please note that the decision about the participation of the funding agencies is still pending. The final list of participating funding agencies will be published in the Call text.

Aim of the call

The call aims to support the development of projects fostering the implementation of Systems Medicine approaches, in both, clinical research and medical practice, by funding a number of high quality research projects that will improve our current knowledge of human health and disease.

Systems Medicine is defined as the implementation of Systems Biology approaches in medical concepts, research and practice. This involves iterative and reciprocal feedback between clinical investigations and practice with computational, statistical and mathematical multiscale analysis and modelling of pathogenetic mechanisms, disease progression and remission, disease spread and cure, treatment responses and adverse events as well as disease prevention both at the epidemiological and individual patient level. As an outcome Systems Medicine aims at a measurable improvement of patient health through systems-based approaches and practice.¹

Demonstrator projects should start with an idea or concept that addresses a clear medical or clinical need. It is expected that project outcomes will improve current knowledge of health and disease, leading to new paths for clinical research aimed at delivering better and more efficient and personalised prevention, diagnostics and treatments of human diseases.

Projects should within their envisaged duration, substantiate the translation of Systems Medicine into medical research and practice by focusing on high quality data sets and clinical relevance. Furthermore they should define new innovative approaches and tools that enable the integration of biological and clinical data that will lead to the creation of new and/or improved computational models. **The added value to the Systems Medicine field should be demonstrated.**

Project proposals submitted under this call may include, but are not limited to, the following research areas/characteristics, as long as they fulfil the definition of Systems Medicine above:

- Understanding of disease complexity, early diagnosis of disease and the re-definition of disease phenotypes that will lead to better patient stratification.
- Understanding the influence of differences like gender, age, ethnicity or other relevant data for the development and treatment of diseases at an individual level.

¹ The CaSyM Roadmap: Implementation of Systems Medicine across Europe' ([PDF](#))

- Investigation of shared common early pathways among diseases such as metabolism, immunology and cell proliferation to predict disease manifestation and progression.
- Exploitation of the prognostic, diagnostic, preventive and therapeutic value of existing clinical material and data or, where relevant, appropriate models.
- Refinement of experimental design and of prospective clinical data collection in newly set cohorts with the use of computational models that lead to a better understanding of the biological processes that play a fundamental role in complex diseases and identify key common underlying mechanisms.
- Definition of a clear strategy to clinically validate the outcomes of the project, including the validation of the predictions of *in silico* computational models that will be developed using experimental and already available clinical datasets.
- Proposals should provide clear evidence on how they expect to access appropriate, relevant and already available clinical material and associated data (patient cohorts with comprehensive clinical characterisation/annotation).

Note: Datasets for the proposed research areas should be already available before the implementation of the project. However, these datasets may be complemented and/or validated during the execution of the project.

In addition, each project proposal must meet the following conditions:

- Projects can be funded for a period of up to three years and according to national funding organisations' regulations.
- Have effective multidisciplinary collaboration involving, both, clinical and translational researchers, medical doctors, epidemiologists, bioinformaticians, data management experts and where possible patient representatives and industry. Each consortium submitting a proposal must include at least one clinical partner, one computational biologist and, where possible, industry.
- Fulfil the legal and ethical international/EU and national and institutional standards.
- Provide a well-designed and feasible Data Management Plan based on the following five principles: Security, Findability, Accessibility, Interoperability and Re-usability.

General condition for application

Joint research proposals may be submitted by higher education institutions, non-university public research establishments, hospitals as well as commercial companies, in particular small and medium-size enterprises (SMEs), according to relevant national funding regulations. Whilst applications will be **submitted jointly** by groups from several countries,

individual groups will be funded by the individual ERACoSysMed funding organization respective of the country from which applicants have applied. The applications are therefore subjected to **eligibility criteria of individual funding organizations. Applicants are strongly advised to contact their national representative and confirm eligibility with their respective funding organizations in advance of submitting an application.**

Only transnational projects will be funded. Each consortium must involve a minimum of three and a maximum of five eligible partners from at least three different countries participating to the call (see list above). For reasons of transnational balance, in this call no more than two eligible partners from the same country are allowed to join each consortium. External collaborators, i.e. groups from countries that are not participating in this call, or research groups from countries that are partners in this joint transnational call but do not ask for funding, may participate in projects, provided that they demonstrate in advance that their economic and human resources have already been secured (i.e. prior to the full-proposal submission) and will be available at the start of the project. The maximum number of external collaborators per consortium is two. The maximum number of partners and external collaborators in each consortium should not exceed seven, i.e. three to five eligible partners, and a maximum of two external collaborators. In order to strengthen the implementation of Systems Medicine throughout Europe, the inclusion of research teams from Slovenia and Slovakia is encouraged. Therefore, consortia including partners from these two countries may increase the maximum number of eligible partners to seven or nine in cases involving two external collaborators.

Each transnational collaborative project should represent the critical mass to achieve the scientific goals, the translation of Systems Medicine approaches into medical research and practice, and to clearly demonstrate an added value from working together. Clinical expertise is mandatory in order to ensure an efficient transfer of results into clinical application.

Timetable

There will be a two-stage submission procedure for joint applications – pre-proposals and full proposals. The call is scheduled to open on February 3rd, 2017.

The content of the call described in this pre-announcement may be subject to changes and is not legally binding to the funding organisations!

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