

ERACoSysMed Joint Transnational Call for Proposals 2015

“European Research Projects to demonstrate the feasibility and benefits of Systems Medicine”

The ERA-Net ERACoSysMed “Collaboration on systems medicine funding to promote the implementation of systems biology approaches in clinical research and medical practice” will begin its activities in January 2015 as the first ERA-Net on Systems Medicine.

The following fourteen parties

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

intend to announce the first transnational call (JTC-1) for funding multilateral research projects that are driven by tangible clinical needs together with the European Commission (EC) under the ERA-Net co-fund mechanism. Projects shall specifically demonstrate the translation of Systems Biology approaches into medical research and practice (Proof of Concept). JTC-1 is expected to be launched mid-February 2015.

Aim of the call

The call aims to support the development of Proof of Concept projects (demonstrator projects) which will improve our understanding of Systems Medicine and demonstrate the utility of this approach in a clinical setting.

Demonstrator projects should demonstrate the translation of Systems Biology approaches into medical research and practice (Proof of Concept).

Demonstrator projects must:

- Start with a *concept* based on a clearly defined *clinical need*. The implementation of this concept must be achieved within the envisaged duration of the project. This means, that while the idea or concept can have a long-term nature, the project must be directed at testing the feasibility of this approach and as a consequence result in a Proof of Concept.
- Use a *Systems Medicine approach* in demonstrating a Proof of Concept. This will lead to new paths for personalized prevention, diagnostics and treatment of human diseases.
- Integrate biomedical data and computational/mathematical models originating from Systems Biology approaches that can realistically contribute to personalized medicine and the opening of new ways for clinical research delivering better prevention and more efficient and personalized therapies throughout life.

The projects shall indicate technological and methodological feasibility and the clinical, economic and social benefit with respect to defined medical questions.

Prerequisites

As a **prerequisite for funding**, applicants need to demonstrate relevant previous work in the field of medical oriented Systems Biology. Other prerequisites for funding include a high methodological and scientific quality of planned activities (excellence) and the applicants' willingness to work in interdisciplinary teams, including the set-up of harmonized processes for data collection, data management and data sharing to realize a Systems Medicine approach from the beginning of the project. The required 'critical mass' of resources and know-how must already be available at the time of application. This applies in particular to the availability of relevant data sets (patient data) and patient samples, both well annotated archived samples and also the collection of new samples sets, as well as the availability of computational/mathematical models/tools.

Each project must meet the following conditions

- Have effective multidisciplinary collaboration of clinical researchers, basic and computational scientists, industrial partners and SMEs (where possible), and relevant stakeholders from different countries. Each consortium should include at least one clinical (research) group.
- Address a greater understanding of disease complexity, early diagnosis of disease and the re-definition of disease phenotypes which will lead to improved patient stratification.
- Generate new knowledge which enables the integration of biological and clinical data and the creation of new mathematical/computational models that take into account the nonlinear spatio-temporal behaviour of complex biological systems.
- Contribute to refining experimental design and clinical data collection by mathematical/computational models which will lead to a better understanding of the biological processes which play a fundamental role in complex disease processes and identification of key mechanisms in diseases.
- Demonstrate the appropriate quality and relevance of available clinical material and the associated clinical data (patient cohorts with comprehensive clinical characterization/annotation). Exploit the prognostic, diagnostic and therapeutic value of newly collected or already existing clinical data or, where relevant, appropriate models.
- Define a clear strategy to validate the outcomes of the project, including the validation of *in silico* mathematical/computational models that will be developed using experimental and clinical data.
- Provide a concept for data management and data handling protocols according to generally agreed standards. Communication, data storage, data/model exchange and data/model sharing should be agreed upon in a common project strategy. In cases that involve the sharing of clinical data, consortia applying will have to provide a data management concept that (i) clearly address the legal and ethical issues of data management, i.e. that entities destined to send/receive privacy-sensitive clinical data are (or will be) legally allowed to exchange data and (ii) describes the management and handling of clinical data, pseudonymized & anonymized clinical data, as well of non-clinical data.

- Ensure the comprehensive implementation of a Dissemination Strategy towards key target-groups.

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 six eligible research groups from at least three different countries participating to the call (see list above). Not more than two eligible research groups from the same partner country participating in the call will be accepted. The consortium coordinator, as well as a minimum of 50% of all research groups must be eligible to receive funding from the funding organisations participating in the call.

Each transnational collaborative project should represent the critical mass to achieve the scientific goals, the translation of Systems Biology approaches into medical research and practice (Proof of Concept), 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 16th, 2015.

Further information can be found on the ERACoSysMed homepage, online in December 2014 (www.eracosysmed.eu).

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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